

PEC/REP1

**FAO/WHO**  
**Pan-European Conference**  
**on**  
**Food Safety and Quality**

25-28 FEBRUARY 2002, BUDAPEST, HUNGARY

**FINAL REPORT**



**FAO/WHO PAN-EUROPEAN CONFERENCE  
ON  
FOOD SAFETY AND QUALITY**

***BUDAPEST, HUNGARY, 25–28 FEBRUARY 2002***

**FINAL REPORT**

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**Issued by the Joint Secretariat of the FAO/WHO Pan-European Conference on Food Safety and Quality, FAO, Rome.**

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## FOREWORD

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Concerns over food safety and quality are increasing worldwide. They are priority issues for governments, food producers, industry, traders and consumers alike. The burden of foodborne disease is significant in all parts of the world, and for some important foodborne hazards the reported incidence of disease seems to have increased over the last decades. In the European region, food safety problems in recent years have increasingly threatened public health and undermined consumer confidence in some crucial parts of the food supply. It has also had severe economic impact on farmers and food producers in the region. The effects of these concerns have signalled a strong need for member countries to strengthen the food safety and quality systems in a sustainable way, with a view to reducing the level of foodborne disease, to restore the confidence of consumers and to improve the conditions of food production and trade within the region and beyond.

The 22<sup>nd</sup> FAO Regional Conference for Europe held in Porto in June 2000, welcomed the initiative of The Netherlands, to strengthen and harmonize food safety and quality policies across the European region and so improve conditions for public health and international food trade.

Therefore the Food and Agriculture Organization of the United Nations and the World Health Organization jointly convened the first **Pan-European Conference on Food Safety and Quality**. The Conference was held in Budapest from 25 – 28 February 2002 at the invitation of the Government of Hungary. Over 200 delegates from 46 European countries, the European Commission and observer organizations participated to discuss food safety and quality concerns of specific interest to Europe.

Several delegations developed comprehensive background documents on food safety and quality issues in Europe and many others provided Conference room documents with important information on food safety and quality concerns in their countries. The participants discussed about opportunities for cooperation in policy and research development and about improvement of information and communication systems. They jointly identified ways to improve food safety and quality situations in the region and provided a final report with recommendations. These recommendations focus on harmonization of food safety and quality regulations, strengthening food inspections and surveillance and improving transparency of food safety control systems across Europe. As most of the knowledge and experience in food safety and quality issues is present in the European region, the Conference saw intra-regional cooperation between countries and organizations as a basis for improvements.

The first Pan-European Conference on Food Safety and Quality offered an excellent platform to discuss European food safety and quality concerns. It brought governments and organizations together to jointly find solutions for problems that affect all consumers in the European region and beyond.

This publication offers you the complete version of documents and final report of this Conference.

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## **ACKNOWLEDGEMENTS**

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The Joint Secretariat of the FAO/WHO Pan-European Conference on Food Safety and Quality wishes to express its sincere thanks to all those that contributed towards the success of this Conference, in particular to the Hungarian Government for their most efficient organization of the Conference and their warm hospitality; to the Netherlands, the European Commission, Switzerland, France and Norway for their financial support, and for all those Member countries and International Organizations that gave technical support during the preparatory stages; to the Chairs and Vice-Chairs and other Members of the Conference Bureau for their dedicated hard work and the exceptional manner in which they conducted the meeting; to the paper presenters for their outstanding presentations and interventions during the debates of the Conference, and last but not least, to the members of the press and communication for their excellent coverage of the event.





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## **I. INTRODUCTION**

1. The Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO) jointly convened the first Pan-European Conference on Food Safety and Quality (the Conference) to identify and discuss ways to strengthen food safety and quality in the European region. The Conference was held in Budapest from 25-28 February 2002 at the kind invitation of the Government of the Republic of Hungary. The Conference was attended by several Ministers and State Secretaries and by a large number of high-ranking policy officers and technical experts from the entire European Region of FAO and WHO. It was also attended by some FAO and WHO Member countries outside that Region and by several international organizations as observers. A list of all participants is included in Annex 7.

2. The 22<sup>nd</sup> FAO Regional Conference for Europe, held in Porto, Portugal in July 2000, welcomed the «Pan-European Food Safety Initiative», to harmonize food safety and quality policies in the European region proposed by the Minister of Agriculture, Nature Management and Fisheries of The Netherlands. As a part of this initiative, it was recommended that a Pan-European Conference on Food Safety and Quality should be convened. The Conference was convened under the provisions of Article VI.5 of the FAO Constitution, and approved by the FAO Conference at its Thirty-first Session in November 2001.

3. The aims of the Conference were to provide a platform for European countries to survey and discuss food safety and quality issues of specific importance to the region and to consider ways and means to improve and harmonize the transparency and reliability of European food chains, in order to strengthen consumer confidence in food products. In particular, the Conference focused attention on opportunities for regional cooperation in the field of policy and science development, enhancement of information and communication systems on food safety and quality issues, and harmonization of food safety policies across the region. The Conference was to provide conclusions and recommendations to improve food safety policies and systems in the region and to enhance intra-regional cooperation in this field.

4. Information about preparatory meetings and other preparations for the Conference is given in Annex 2. The provisional agenda for the Conference is to be found in Annex 1.

## **II. OPENING CEREMONY (AGENDA ITEM 1)**

5. The Opening Ceremony was led by the Minister of Agriculture and Regional Development of Hungary, His Excellency Mr. András Vónza, the host of the Conference. Minister Vónza addressed the Conference and the text of his address is appended in Annex 3.

6. The Minister of Health of Hungary, His Excellency Mr. István Mikola, addressed the Conference. He said that it was an honour for Hungary to host the First FAO/WHO Pan-European Conference on Food Safety and Quality. The text of his address is appended in Annex 3.

7. The Assistant Director-General of FAO's Economic and Social Department, Mr. Hartwig de Haen, made a statement on behalf of the Director-General of FAO. He welcomed delegates to the Conference and thanked the Minister of Agriculture and Regional Development of Hungary for his Government's kind offer to host this important Conference. The text of Mr. de Haen's address is appended in Annex 3.

8. The Executive Director, Office of the Director-General of WHO, Mr. David Nabarro, made a statement on behalf of the Director-General of WHO. The text of his address is appended in Annex 3.

### III. KEYNOTE ADDRESS (AGENDA ITEM 2)

9. In his keynote address, His Excellency Mr Laurens Jan Brinkhorst, Minister of Agriculture, Nature Management and Fisheries of The Netherlands, complimented FAO and WHO for their joint organization of this Pan-European Conference on Food Safety and Quality. He supported the appeal of FAO's Assistant Director-General, Mr. de Haen, for a successful World Food Summit: *five years later*. Mr. Brinkhorst underlined the essential link between food safety and food security and noted that FAO traditionally focused mainly on food security. He said that FAO should continue to do so, in view of the large number of undernourished people worldwide. However, when looking at developments in Europe, a link between food security and food safety, which is one of the political issues in Europe, is essential. In that context FAO has a challenge for the European Region. The summary text of Minister Brinkhorst's address is appended in Annex 4.

#### Nomination of the Chairperson

10. His Excellency Mr. András Vónza thanked the speakers for their contribution. He nominated Ms. Diana Bánáti, Director-General of the Hungarian Central Food Research Institute, as Chairperson of the Conference and Head of the Conference Bureau.

### IV. REMARKS BY THE CHAIRPERSON OF THE PLENARY MEETING (AGENDA ITEM 3A)

11. In her opening address, Ms. Bánáti noted the timeliness of this Conference, and the opportunity that it presented to address the specific concerns of the European region. She expressed her gratitude to the donors that had made the Conference financially possible: European Commission, Hungary, The Netherlands, Norway, Switzerland, FAO, WHO and others.

12. The Chairperson made the following announcement before the substantive part of the meeting was opened:

“ The European Community is participating in this meeting in accordance with paragraphs 8 and 9 of Article II of the FAO Constitution. I have been asked to inform you that the declaration made by the European Community and its Member States is contained in

information document PEC 01/INF 01, which has already been distributed to all members of the meeting. I would draw the attention of the meeting to this declaration.”

13. The Secretariat stated that several Conference Room Documents had been received and made available in the original language for consideration by the participants.

#### **V. ELECTION OF OFFICERS (AGENDA ITEM 3B)**

14. The Secretariat announced that the Chairperson of the Plenary Meetings would be assisted by two Vice-Chairpersons and a Rapporteur. Each of the Vice-Chairpersons would chair one of the Working Groups and be assisted by a Deputy-Chairperson and a Rapporteur. These officers comprised the Conference Bureau.

15. The Conference elected Mr. Johan de Leeuw (The Netherlands) and Mr. Patrick Wall (Ireland), as Vice-Chairpersons and Mr. Stuart Slorach (Sweden) as the Rapporteur of the Plenary Meetings of the Conference. The Conference appointed Mr. Johan de Leeuw as the Chairperson of the Working Group on Policy and Science Advancement and nominated Mr. Carl-Josef Weiers (Germany) as Deputy-Chairperson and Dr. Isabelle Chmitelin (France) as Rapporteur. The Conference appointed Mr. Patrick Wall (Ireland) as the Chairperson of the Working Group on Information and Communication Development and nominated Mr. Andrei Vershinin (Russian Federation) as Deputy-Chairperson and Mr. Krumoslav Capak (Croatia) as Rapporteur.

16. The Conference agreed that a Drafting Committee should be established to prepare the final report of the Conference for adoption, with the technical assistance of the Secretariat. The Drafting Committee consisted of the Members of the Conference Bureau.

#### **VI. ADOPTION OF THE AGENDA (AGENDA ITEM 3C)**

17. The Agenda for the Plenary Meeting was adopted as proposed.

18. The Conference took notice that following the presentation of the papers of the Conference, the specific agenda items of the Working Groups would be determined in plenary.

#### **VII. PRESENTATION OF THE CONFERENCE PAPERS (AGENDA ITEMS 4 AND 5)**

19. Nine Conference papers prepared by Members and NGOs were presented in plenary with the objective of identifying the main items for discussion in the Working Groups and to outline the recommendations suggested by the authors of the papers. The participants took note of the Conference Room Documents received. The Conference Papers and Conference Room Documents are found in Annexes 5 and 6.

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**PAN-EUROPEAN COOPERATION IN POLICY AND SCIENCE ADVANCEMENT  
(AGENDA ITEM 4)**

***Food Safety and Quality in Europe - Emerging issues and unresolved problems: France***

(Conference paper PEC 01/03, presented by Dr. Isabelle Chmitelin from France)

20. In response to recent food safety issues and the high level of media attention to these events, many European countries have recently reconsidered the organization of their food safety systems.
21. Most of the models selected include:
- strengthening of the systems for surveillance of foodborne diseases and food contamination;
  - implementation of operational and rapid response control systems (both official and industry testing);
  - a close association of citizens/consumers to the decision making process.

Each of these elements has limitations of a societal, economical or technical nature that should first be identified in order to provide appropriate responses. In this context it is also recognized that traceability is a major tool for risk management.

22. In the course of the discussion, the French delegation was requested to give further information on the limitations to risk management as implemented in France. The head of the French delegation re-emphasized three major limitations:

- on the consumers' side, more discussions with, more involvement of the consumers and of their associations in the decision-making process are still necessary. In France, several fora have been established in that context;
- cost is obviously a potential limitation, although less so in those countries where financial support has been provided for that purpose; however, the problem remains for countries with smaller financial resources;
- the detection limit for some chemicals or micro-organisms is also a problem, and the international fora, such as expert committees or the Codex Alimentarius have a major role to play in this context.

23. The representative of Consumers International made a point explicitly supporting the French approach in involving the consumers in the decision-making process.

***Statistical Information on Foodborne Disease in Europe: Microbiological and Chemical Hazards: World Health Organization***

(Conference paper PEC 01/04, presented by Dr. Cristina Tirado from WHO, Rome)

24. Foodborne disease caused by microbiological hazards is a large and growing public health problem. Most countries with systems for reporting cases of foodborne diseases have documented significant increases over the past few decades in the incidence of diseases caused by micro-organisms in food, including *Salmonella* spp., multi-resistant *Salmonella typhimurium* DT104 and *Campylobacter jejuni*; there are also increasing reports of disease outbreaks caused by *Listeria monocytogenes* and *E. coli* O157.

25. Exposure to chemicals is a significant cause of foodborne diseases, although effects are often difficult to link with a particular food. Chemical contaminants in food include natural toxicants, such as mycotoxins, or environmental contaminants, such as dioxins, mercury, lead, and radionuclides. Food additives, pesticides and veterinary drugs are also widely used and it is essential to assure that these uses are safe.

26. Surveillance of foodborne disease and food contamination monitoring are essential tools for risk assessment. For this reason, major efforts are being made to develop adequate methods of surveillance of foodborne diseases and food contamination monitoring to provide the necessary data for quantitative microbiological and chemical risk assessment. Data was presented on foodborne diseases in the European Region and information on chemical contaminants, additives and residues in foods that may have an adverse impact in health. Future activities to prevent both microbiological and chemical risks should be discussed.

27. In the discussion, it was stated that the WHO Surveillance Programme of Foodborne Diseases in Europe focused on the collection of information from investigated outbreaks, rather than on disease incidence. Comparison of disease incidences between countries is difficult, due to differences in surveillance systems, reporting systems, and diagnostic methods. WHO is looking forward to the coordination of its activities on surveillance and food contamination monitoring with those of the European Commission, to avoid duplication of work in view of the creation of the European Food Safety Authority.

28. In addition, it was stated that although the major part of the problem with antimicrobial resistance relates to the human use of antimicrobials, WHO considers an important preventive measure will be the control of use of antimicrobials in animal production, especially the use of growth promoters.

***System of Food Safety in Poland - Present situation and prospects for change: Poland***  
(Conference paper PEC 01/05, presented by Mr. Lujian Szponar from Poland)

29. Food safety and quality policies in Poland were reviewed with an emphasis on harmonization and changes in food safety regulation since 1989, moving towards accession to the European Union. Changes following the introduction of a market-orientated economy have impacted on agriculture and food production, contributing to improved food safety. Strategies for further improvements, including the development of food safety policy and reform of food controls indicated the future direction and emphasis for the system of food safety in Poland.

30. In discussion it was stated that the Polish food safety strategy - from farm to fork - aimed to eliminate the risks of foodborne diseases, but it was recognized that it was not possible to reduce the risks to zero. However, it was possible to make further improvements in food safety.

31. In response to a question about the implementation of the HACCP system for dietetic foods, it was stated that it was particularly important to ensure food safety in this branch of the food industry, since these foods were intended for infants and young children and those with suppressed immune systems.



***Examples of comprehensive and integrated approach to risk analysis in the food chain - experiences and lessons learned: Sweden, Finland, European Commission***

(Conference paper PEC 01/06, presented by Dr. Stuart Slorach from Sweden)

32. The need for and application of a holistic approach to risk analysis and food safety throughout the food chain, at the national, regional and international levels was highlighted. Responsibilities of those who produce, process and trade food were explained. Tackling problems at source using an integrated, multidisciplinary approach was emphasized and successful examples (such as the control of *Salmonella* in poultry in Sweden and Finland) were given. The importance of control on the use of pesticides and veterinary drugs and of making the results of food control activities public was emphasized.

33. In reply to questions, the Conference was informed that as eggs and red and white meat in Finland and Sweden were virtually free from *Salmonella*, the risk of contracting salmonellosis from these foods was small. Only 10-15% of all notified human cases were domestically acquired and there had been little problem with *S. enteritis* in eggs. Finland and Sweden had received special "Salmonella guarantees" when joining the EU in 1995. Certain foods exported to them from other EU countries had to undergo testing for *Salmonella* and be certified as Salmonella-free.

***Institutional and scientific co-operation, networking and capacity building in the field of food safety and quality: Hungary and the Netherlands***

(Conference paper PEC 01/07, presented by Mr. Cornelis Houtman from The Netherlands)

34. The situation regarding scientific co-operation, networking and capacity building in the field of food safety and quality in Hungary and The Netherlands was explained. Specific details were given about institutional co-operation, including staff and student exchange, collaborative projects in policy and science advancement, institutional and scientific networking projects and capacity building. Within a dynamic and fragile marketplace, with ever-changing consumer expectations, the implications and application of a Pan-European approach to further scientific and capacity building co-operation in food safety and quality were raised.

35. The consistency of networks with other food safety systems was raised in discussion; in particular, the differences between networks operating on a voluntary basis and those systems that were obligatory. It was noted that the GMO research network (ENTRANSFOOD) may not immediately result in a strategy, but that the main use of the network lies in pre-empting difficulties that might arise from the use of GMOs, and in providing an opportunity for working together, with all stakeholders, towards finding possible solutions to the problems identified.

**PAN-EUROPEAN COOPERATION IN INFORMATION AND COMMUNICATION DEVELOPMENT  
(AGENDA ITEM 5)*****Rapid alert system for food products in the European Union and its possible extension to other countries in the Region - the development of harmonized regional strategies for food safety and the implementation of food security communication networks: European Commission***

(Conference paper PEC 01/08, presented by Mr. Patrick DeWevre from the European Commission)

36. The European Community's Rapid Alert System was introduced, with emphasis on the legal basis of the system, the detailed procedures of its application and how the system works. Proposed improvements to the System were discussed, as were the underlying principles for such a communication network. Further opportunities were highlighted for agreements with other similar systems, including those developed by third countries or other organizations, and the creation of a network to cover the entire European region.

***Emerging Risk Identification System (ERIS) – Information exchange and networking: The Netherlands and Romania***

(Conference paper PEC 01/09, presented by Mr. Edwin Hecker from The Netherlands)

37. The initiative to set up a new system (ERIS) to identify emerging risks to food safety was presented. No such system has previously been developed.

38. In co-operation with the EU, FAO and WHO, the Netherlands initiated an inventory to investigate the possibilities of such a system. In the presentation three steps of the system development were shown. These included the identification of indicators that signal emerging risks, a computer search system to look for such risks, and communication with parties that need such a system.

39. The success of the system depends on regular input on all relevant aspects of food safety. Input of indicators or emerging risks and data to look for these risks from Ministries and research institutes in each country will be crucial for the success of ERIS. Therefore, co-operation and input from participating countries is needed to make the system operational.

40. The Pan-European Conference provided the opportunity to discuss the first steps of ERIS, and to gather input and discuss the initiative further throughout Europe.

***The Biosecurity Portal - A mechanism for the exchange of official information on Food Safety, Animal and Plant Health: FAO***

(Conference paper PEC 01/10, presented by Mr. David Nowell from FAO, Rome)

41. FAO presented an initiative to provide a single mechanism - the Biosecurity Portal - for the exchange of official information on food safety, animal and plant health, as related to the FAO mandate. Information will be provided from national and international agencies maintaining 'ownership' of the information. FAO could provide the mechanism and technical support for the Portal so that official information can be made available and readily accessed in a co-ordinated way. Examples of the type of information that could be accessible via the Biosecurity Portal were given, as was the likely technical assistance that FAO could provide to facilitate this. Access to the Biosecurity Portal will be widely available and free, although certain areas may be developed with restricted access limited to Member Countries. It is Internet- based to ensure wide usage and cost effectiveness.

42. In discussion it was noted that there was a need for national commitment to develop, and to use official information exchange systems, such as the EU Rapid Alert System and the Biosecurity

Portal being developed by FAO. This was because these systems require obligatory information input: they are not voluntary networks for the exchange of information.

43. Clarification of the exact purpose of the Biosecurity Portal was requested in the context of its formal role as the deposit of official information such as risk analyses, and its role as a discussion forum for countries to exchange ideas and form opinions.

44. FAO replied that the system was envisaged primarily as an official forum for the exchange and deposition of biosecurity information e.g. risk assessments, legislation, regulations, and publications. This was usually official information that has a national obligation in terms of international or regional legal agreements. However, the Biosecurity Portal already has the technical capacity to host a discussion forum that might be relevant to official information. The Portal is a flexible system that can be developed to ensure that members' needs for the exchange of official information are met.

***Consumer information and participation in interactive communication with consumers on food safety risks and food quality: BEUC, the European Consumers Organization***

(Conference paper PEC 01/11, presented by Mr. Jim Murray from BEUC, Brussels)

45. Independent consumer organizations are essential elements in the process of communicating with consumers about food and food risks. This process of communication has become more important in recent years because of changes in food production, composition, distribution, processing and origins, combined also with changes in consumer habits and attitudes. The effectiveness of interactive communication about risk assessment and management will depend on the overall openness and transparency of the assessment, decision-making and scientific process. Efforts will also be needed to increase understanding between consumers and scientists. Communication with consumers carries on against a background of marketing claims; more study is needed on the overall cumulative effect of such claims on consumers' understanding and misunderstanding of food issues.

**Statement of the European Commission**  
(Conference Room Document PEC/CRD 18)

46. The delegate of the European Commission, Mr Nymand-Christensen, informed the Conference that the establishment of the European Food Safety Authority, EFSA, is a milestone in the development of an efficient food safety system in the European Union. The European Commission's White Paper on Food Safety identified EFSA as a key element of the food safety strategy of the EU.

47. The EFSA is built on the principle of separation of risk assessment from risk management. The Authority will also be responsible for risk communication to the general public. It will be given full autonomy from the European Commission, and political bodies, such as the Council of Ministers and the European Parliament.

48. The scientists that will be appointed to the new EFSA Scientific Committee and the individual Scientific Panels will be chosen only on the basis of their experience, independence, expertise and excellence.

49. The delegate of the European Commission stated that it is the clearly identified objective that the EFSA should become a central coordinator at European level of all work related to scientific advice and risk assessment and will draw on the best scientific knowledge available.

50. While the EFSA was created to meet the needs of the European Union, all European countries present at this Conference are invited to ensure that their own risk assessment authorities are ready to work in an open Europe-wide network to the benefit of all participants.

51. The new European Food Safety Authority will change quite substantially how the European Union and its Member States will address risk management decisions in the future. Ultimately, the European Commission assumes that it will lead to greater trust and confidence in the whole food safety system by the public, in particular the European consumers.

### **Discussion**

52. In discussion, several non-EU Member countries shared their experience and status in food legislation, food control and drew the attention of the Conference to existing problems such as:

- Division of responsibilities for food legislation and food control among various ministries and institutions
- Multiple, and therefore weak, infrastructure of food control laboratories;
- Lack of awareness on food safety issues among various groups in society (including the decision makers);
- The necessity to harmonize risk assessment and food legislation requirements with those established by the Codex Alimentarius Commission and the expert advisory bodies maintained by WHO and FAO, and
- Lack of the Government commitment to support some kinds of food industries to operate on GHPs, sector specific hygiene codes and according to HACCP principles.

53. In response to the question raised by some delegations regarding the division of responsibilities in risk assessment and risk management, the Representative of WHO said that there should be separation between the risk assessors and risk managers. In countries where risk assessors and risk managers belong to the same organization it was essential to ensure a functional, well-documented and transparent separation between their respective functions.

54. The Conference accepted the proposal of the Bureau and the Secretariat regarding the Procedures and the terms of reference for the Working Groups as presented in documents PEC 01/13 and PEC 01/14.

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## **VIII. OTHER MATTERS (AGENDA ITEM 6)**

55. No other matters were brought forward.

## **IX. AGENDAS OF THE WORKING GROUPS**

56. The Conference agreed to discuss the items proposed during the discussion of the Conference papers, in two parallel Working Groups:

- Working Group I on Pan-European cooperation in policy and science advancement;
- Working Group II on Pan-European cooperation in information and communication development.

57. The Conference decided to proceed with discussions in these Working Groups, based on a draft Synopsis of Recommendations (PEC 01/12) prepared by the Secretariat. Four main issues for discussion were identified:

- Identification of risk sources and scientific advice
- Regulation, control and enforcement
- Capacity building, education and networking
- Information systems and risk communication

58. It was agreed that the first two items would be discussed in Working Group I and the last two items in Working Group II. It was agreed that issues of general importance, regarding the status and follow-up of the Conference, would be discussed in plenary. It was agreed that the two Working Groups would report their conclusions and proposals for recommendations to the plenary meeting. Following discussions in plenary, these would be adopted as the conclusions and recommendations of the Conference.

## **X. SUMMARY OF DISCUSSIONS OF THE WORKING GROUPS**

### **Working Group 1**

59. Many delegations pointed out that harmonization of standards/requirements and food legislation was essential in order to avoid duplication and waste of financial resources which were limited not only in developing, but also in developed, countries.

60. Some delegations stressed that the integration of administrative structures into a single food safety control unit would assist in more uniform application of the food safety control, while other delegations were of the view that the diversity of food control systems should remain, as it was up to national governments to decide how best to implement the decisions of the EC. Views were expressed that the virtual food control authority might provide some assistance in this regard. The Working Group agreed that the streamlining of the activities in food control and the “from farm to fork” approach should be emphasized, instead of giving strict recommendations regarding the place

and the designation of the responsible ministry. In addition, very close coordination of food control activities must be ensured.

61. It was emphasized that the ultimate responsibility to ensure the safety of food should rest with the producers and marketers of food.

62. Some delegations emphasized the necessity to ensure the openness and full transparency of the risk assessment process and the need to ensure that minority opinions were conveyed to the consumer.

63. Some delegations questioned the existence and the content of the definition of food safety. In this regard, the Representative of the Codex Secretariat informed the delegates that such a definition existed in the framework of Codex and therefore was used throughout the world.

64. Some delegations pointed to the necessity of establishing better methodologies and links between food, nutrition and food/nutrition-related diseases. It was indicated that nutrition status data, based on real food consumption figures, was an essential element in ensuring the accuracy of the risk assessment and therefore should not be omitted from the terms of reference of food control authorities.

65. Many delegations emphasized the need for continuing education and training of various levels of society in different aspects of food safety.

66. While recognizing problems and constraints experienced by the small food business sector, the Conference agreed that the HACCP system should be a basic tool in ensuring food safety, and therefore it was essential to get support for its implementation.

67. The Delegation of Norway expressed its appreciation to the EU for its proposal to associate different countries in cooperation activities. It was stressed that existing systems should be connected, and the exchange of information facilitated and open to all interested countries of the region.

68. The Representative of FAO drew the attention of the Conference to the need for capacity building in developing countries. He also informed the delegates that FAO/WHO/OIE/WB and WTO developed the joint initiative in the area of food safety and animal and plant health. Assistance could be provided in developing food legislation, in preparing the programmes for investment and in carrying out the necessary institutional arrangements.

## **Working Group 2**

69. Food safety is a complex issue with many dimensions, including public health, scientific, consumer confidence, political and trade. The primary goal is to reduce or prevent foodborne disease by making food safer. However, equivalent levels of risk in different sectors do not always receive the same level of risk management intervention. For example, whereas *Salmonella* contamination of raw poultry is acceptable in one country and left for the consumer to manage, in

Finland and Sweden the industry must ensure that the same products are *Salmonella*-free for the consumer.

70. Science-based solutions are needed for the introduction of evidence-based policies and to target resources appropriately. Scientific solutions are made difficult by the fact that there can be different scientific opinions and scientific certainty is not always possible. Often insufficient data is available to make a scientific assessment and scientific assessments cannot be carried out quickly enough in a crisis. Furthermore, different scientists holding different views create confusion in the eyes of the consumer. When scientists in the US maintain that growth promoters in beef production are perfectly safe and EU scientists argue that they are unsafe it can be difficult for consumers to have confidence in scientific argument.

71. The public perception of risk can be very different from that of scientists and scientific explanations alone are often not sufficient to allay consumers' fears. For example, scientists advocate irradiation as a good method to kill spoilage organisms and pathogens, whereas consumers have reservations about using the technology. Similarly, scientists reassure consumers that GMOs from a food safety point of view are as safe as conventionally produced food, yet many consumers are far from satisfied.

72. Many food scares are not associated with adverse health effects and may present little or no risk, but sensational and dramatic coverage by the media can precipitate a consumer reaction out of all proportion to the risk. Risk management should be proportional to the risk to consumers' health, rather than to the intensity of media coverage. Perception is reality for consumers and unless the level of understanding of the issues is raised with the media and with the public, consumer confidence will continue to be damaged. Furthermore, the level considered acceptable for a specific risk can vary between groups of consumers, groups of scientists and in different countries. Food safety has become politicized both within countries, with politicians accusing each other of mismanagement of crisis etc, and with countries becoming involved in disputes about whose food is the safest. On a larger scale, regions such as the US and EU, argue against each other on the issues of GM food and hormone-produced beef. Much of food legislation and many standards were devised to facilitate trade, rather than to protect consumers, so it can be difficult to separate trade issues from those relating to protecting consumer's health.

73. Increasing globalization will continue and there is no better way for countries to help each other and build bridges than by engaging in fair trade with mutual trust and using the Codex Alimentarius Code of Ethics for International Trade in Food.

74. It was agreed that countries must apply the same standards of safety and certification to goods they export as they do to goods they import. The challenge is to maintain the diversity of foods available and include as many countries as wish to participate in agrifood trade, whilst harmonizing standards.

75. The issue of when to communicate risk to consumers to avoid food scares caused much debate. Should one go out with a message early to be proactive and ahead of the media or should one wait until a risk management strategy has been devised so consumers can be reassured that control measures are properly managed? Communicating risk on its own without some form of risk

management arrangement is not the ideal, but history shows that openness and transparency with consumers from the outset is best.

76. It was agreed that interregional co-operation should be expanded in the fields of capacity building and research. Strengthening the cooperation between scientists and building on existing networks will maximize the health gain achieved. Methods to communicate the decision-making process to consumers and involve consumer representatives where possible should be explored. Good surveillance systems in animals, food and humans are needed if public health priorities are to be identified, trends monitored, interventions evaluated, emerging threats detected and suitable data made available for effective risk assessment. Standard protocols and methods are needed to acquire comparable data and the existing networks attempting to achieve this, such as ENTERNET should be supported. The ability to compare isolates from humans, food and animals using molecular typing facilitates the tracking of problems through the food chain to the point where corrective action is needed. It was agreed that there is ample opportunity for countries with these facilities to help others. Information on the results of all official monitoring tests and on the outcome of official food inspections and other official food control activities should be made public, as openness and transparency build consumer confidence.

### **Rapid Alert Systems in the EU**

77. The EU Rapid Alert system (RAFFS) was explained, including the legal basis of the system, the detailed procedures of its application and how the system operates. Proposed improvements of the system were discussed, as were the underlying principles for such a communication network. The system operational in the EU has proved to be a useful instrument to support consumer protection and international food trade. Accession countries will legally be required to join this system when they become EU Member States. Arrangements are in place for other countries to join RAFFS by bilateral agreement once they comply with the strict criteria for entry. In addition to receiving and providing information on alerts, each country should develop an effective infrastructure to enable the taking of corrective action to control and minimize the adverse human health effects of a contamination incident or to prevent adverse health effects completely.

78. The issue of global alert system was discussed at length and with the increasing global distribution of food this was considered desirable, but difficulties are envisaged. The EU system is mandatory and unless some mechanism is found to make it a requirement for countries participating in a global system to comply, it would be largely ineffective and may not provide added value.

### **The Agroweb CEE network**

79. This system, involving 22 countries, was described and demonstrated. Its objective is to increase the effectiveness of the flow of agricultural information between Central and Eastern European countries and thus to contribute to the exchange of experiences and to establishing cooperation in the region, to facilitate access to information on agricultural institutions in individual Central and East European countries to residents of this region, to make it easier for inhabitants of



remaining regions of the world to get access to information on agriculture in Central and Eastern European countries and to serve as a model for setting up similar Agroweb networks for other regions of the world. It was agreed that this network could also be used as a platform to create a food and nutrition subportal. A pilot project to develop such a network is to commence in the Ukraine.

80. RIKILT, Wageningen University in the Netherlands, co-ordinates two scientific networks: the European Thematic Network on Safety Assessment of Genetically Modified Food Crops (ENTRANSFOOD) and the European Food Safety Network (EFSN). ENTRANSFOOD is funded by the European Commission in the fifth framework programme. The objectives of ENTRANSFOOD are:

- To identify key issues of the safety evaluation of GM crops;
- To co-ordinate ongoing research regarding safety testing and detection of transgenic foods in European 5<sup>th</sup> frame-work programme
- To design new (*in vitro*) methodologies for safety testing;
- To address the risk of gene transfer from genetically modified organisms to the gut microflora of humans and animals;
- To examine new strategies for the detection of genetically modified raw materials;
- To examine the fate of genetically modified raw materials and processed products throughout food production chains (tracking and tracing).

More information and ENTRANSFOOD results can be found on the website: [www.entransfood.nl](http://www.entransfood.nl).

81. EFSN is a network of public institutes working in the field of food safety. EFSN facilitates exchange of information and the development of joint activities concerning:

- General food safety research
- Early identification
- Who is who for immediate expert advice
- Development and exchange of methods
- Safety assessment procedures for advice and registration
- Expert advice to EFSA and national food safety authorities

EFSN links to existing EU structures. More information can be found on the website: [www.efsn.net](http://www.efsn.net).

82. Both the FAO Biosecurity Portal and the ERIS and the TRAPEX systems were discussed. It was considered that systems to anticipate problems to enable preventive action are needed.

### **The FAO Biosecurity Portal**

83. The FAO Biosecurity Portal, a web-based information system accessible by a single Internet page, was discussed. It was considered that the portal provides official national and international information on food safety, plant and animal health and provides the opportunity to exchange information. The system is in its initial stages and will require a degree of development in partnership with WHO, OIE and other stakeholders.

**Other topics**

84. The goal for all participant countries is to put the appropriate mechanisms in place to ensure that food is safe to eat. To achieve this it was agreed that, industries along the food chain must demonstrate that they have the commitment and the competencies to produce safe food. Regulatory agencies must have the capability and resources to enforce compliance with a co-ordinated approach along the entire food chain. Furthermore, it was suggested that consumers must acquire confidence in the safety of food and confidence that industry and the regulatory agencies are putting the concern of protecting public health before trade issues. All agreed that often zero risk is not achievable, but the challenge is to explain this to consumers and to ensure that everything reasonable is being done to minimize the risk.

85. Producing safe food is a shared responsibility along the continuum from farms to consumers. Insufficient attention to safeguards and controls in one sector can undo, or impede, the good work of others along the continuum. The way forward is sequential incremental risk reduction along the food chain, with communication of the residual risk, if any, and how the risk should be managed, to end users. End users can be stakeholders along the food chain or the final consumers. It was agreed that education of all the stakeholders in the food chain was crucial for raising the level of competence of all in the food business.

86. Education of the inspectorate responsible for ensuring compliance is also key issue and, as food processing and manufacturing becomes more complex with new technologies and innovative approaches, the enforcement inspectorate must keep pace with the changes and acquire the necessary skills to recognize risks to ensure that they are being addressed appropriately. Several delegates described initiatives in their countries to strengthen the inspectorate.

87. Educating consumers and those involved in food production and preparation is a major challenge to increase the level of understanding and raise standards. It was suggested that the techniques of marketing experts should be used to disseminate the food safety message by segmenting consumers into different target groups and tailoring the message accordingly. Making people aware is the starting point, increasing knowledge comes next, followed by changing attitudes and finally, most difficult of all, changing behaviour. Converting scientific information into a format understandable to lay people is necessary to improve understanding and professional communicators should be utilized. The inclusion of food safety and nutrition education in the curriculum of both primary and secondary schools to educate the consumers and future workers in the food industry was considered important. The involvement of Ministries of Education with Ministries of Health and Agriculture in an integrated approach was considered important.

88. Education initiatives and public awareness campaigns are expensive to produce and countries could share programmes. FAO, WHO and EFSA could facilitate resource collaboration between countries so that material successfully developed and used in one country could be adapted for others. Similarly, the three organizations could facilitate collaboration in risk assessment and the development of risk management strategies.

89. Lists of notifiable pathogens and contaminants in animals, food and humans should be agreed for effective Pan-European surveillance. Methodologies to identify emerging problems at an early stage should be developed. Funding sources for the necessary surveillance systems, both national and Pan-European, need to be addressed. Providing the opportunity to engage consumers in public debate in open, easily accessible fora was considered a good approach to adopt. It is important that the burden of food-related disease as a result of inappropriate diet is not overlooked. Initiatives, with both the trade and consumers, to reduce the incidence of chronic diseases associated with poor dietary habits should be taken.

## **XI. RECOMMENDATIONS OF THE CONFERENCE (AGENDA ITEM 7B)**

### **Main recommendations**

1. Regional and national networks need to be improved and/or established for the collection, compilation and sharing of information and data on aspects of food quality and safety, food risks and contamination and foodborne diseases to improve comparability and equivalence of policies and to support harmonization. These networks should be linked, coordinated and open to all European countries.
2. Collaboration is required to strengthen and harmonize integrated and transparent systems for surveillance, outbreak investigation, reporting systems and diagnostic methods on food safety and quality.
3. Enhanced cooperation between the health, agriculture, fisheries and food production sectors is necessary for food safety surveillance and monitoring.
4. As improvements in public health and international trade of food products are often hindered by discrepancies between food safety and quality policies across Europe, there is a need to increase the compatibility of food safety and quality systems by implementing equivalence, transparency and harmonization of regulations and control across Europe.
5. Food safety strategies should be risk-based, giving priority to problems that pose the largest threats to health and to measures that have the potential to result in the greatest reductions in food-related diseases.
6. In order to avoid duplication and waste of resources, cooperation between national, regional and international experts and advisory bodies in the area of food safety should be intensified.
7. An integrated and multidisciplinary policy approach to food safety and quality should be applied with participation of all governmental and non-governmental stakeholders in the whole food chain, including primary production.

8. Prevention-oriented regulation and control systems for reduction of food-borne disease, reduction of food safety risks and protection of the environment should be developed and coordinated.
9. In policy making, consideration should be given to other legitimate factors in addition to risk assessment that are of concern to consumers, such as ethical and religious concerns and the desire to promote more sustainable food production practices.
10. In case of scientific uncertainty or where risk assessment is not conclusive, provisional risk management measures may be adopted based on the precautionary principle.
11. Cooperation on capacity building at the international and regional level should be improved and strengthened to build on national experiences and national food safety strategies, as well as to avoid duplication of work. The initiative under development by FAO, WHO and OIE, in collaboration with the World Bank and WTO related to capacity building in food safety, animal and plant health should be further developed.
12. To improve food safety, a clear attribution of responsibilities should be made at the national level, especially related to scientific advice, risk assessment, policy advice, policy making, risk management, regulation, control, enforcement and communication. An effective coordination system is needed.
13. With particular regard to scientific advice, risk assessment and risk communication, an independent, transparent and effective national food safety authority is recommended.
14. The need for effective and independent risk assessment was stressed. In cases where there are minority opinions, these should be mentioned in the risk assessment report and the degree of uncertainty equally addressed. Risk assessment should be carried out in an independent, open and transparent manner and should also address new or unforeseen risks.
15. In some cases, there might be advantages, including economical benefits, in giving a single agency responsibility for official food monitoring and control along the whole food chain. If, however, responsibility is divided between two or more agencies, there should be very close cooperation between them. Cooperation at the regional level should also be developed and enhanced.
16. Official control services involved in food safety systems must be provided with the necessary resources, both financial and human, for carrying out their missions.
17. Pan-European cooperation needs to be expanded in the fields of policy, research and education in view of the major differences in food safety and nutritional policies, in scientific knowledge and in the level of protection of consumers' health. As a basis for capacity building efforts in this area, European authorities and public and private research institutes should strengthen their cooperation and expand scientific activities, information networks and risk management strategies. Methodologies to anticipate and identify emerging risks at an early stage should be developed.

18. Improved education and training in food hygiene should be used to increase the competence of the workers and effectiveness of inspectors throughout the food chain. Education of consumers should begin at school. FAO, WHO, and regional bodies such as the European Commission, should encourage member states to inform consumers by assisting with education initiatives for all stakeholders in the food chain and public awareness campaigns.
19. Open consultation and public debate involving consumers and all other stakeholders is needed in order to increase the confidence of consumers in the safety of food and to develop a comprehensive, transparent and integrated approach to food safety and nutrition policy.
20. The Rapid Alert System for Foodstuffs, operational in the European Union, has proved to be a useful instrument to support public health, consumer protection and transparency in international food trade. Other European countries are encouraged to participate in this system considering the benefits and obligations linked to such participation.
21. Information on the results of all official monitoring tests and on the outcome of official food inspections and other official food control activities, should be made public as openness and transparency builds consumer confidence.
22. FAO and WHO should facilitate setting up regional programmes on food safety information and communication with standardized information. Such programmes should be developed in co-operation with consumers, industry and the relevant authorities.
23. The development of strong, independent consumer organizations should be encouraged as an essential element in public discourse. European countries should consider the adoption of new methodologies to gauge consumer perceptions and concerns. Interactive dialogue between scientists, risk managers, producers and consumers at all stages of the decision-making process is essential as a key to better mutual understanding of risk assessment, risk management and risk communication.
24. FAO, WHO, EC and other European donor countries should explore the possibility of assisting with capacity building and education initiatives in those Pan-European countries with special needs.

### **Other recommendations**

1. The quantity, quality and timeliness of data collection and reporting at the national level and to the WHO Surveillance Programme for Control of Food-borne Diseases in Europe need to be improved. This may require the allocation of increased financial and human resources to achieve this goal.
2. Food microbiology data for risk assessment need to be collected to assist the Joint FAO/WHO Expert Consultation on Risk Assessment of Microbiological Hazards in Food (JEMRA). National capacities to perform microbiological risk assessment, with particular

regard to the use of the outcome of international risk assessments, as well as the methodology utilized, should be strengthened.

3. National capacities to perform risk assessments of chemicals in the food supply should be strengthened and unbiased monitoring and studies should be carried out to determine levels and trends of chemicals in food. Consideration should be given to the development across Europe of harmonized data reporting formats for chemical contaminants in food as the first step in developing consistent and comparable assessments for both health and standards-setting purposes, including Codex Alimentarius work. In this regard, the GEMS/Food data structure could be considered as the default if no other format is available.
4. Total diet studies should be conducted at the national level, to assess dietary exposures to toxic chemicals by the overall population, as well as by vulnerable groups such as children. The consumption part of such studies is expected to provide valuable information and will also be useful in microbiological risk assessment. Technical and financial assistance should be provided, where appropriate to facilitate total diet studies at the national or sub-regional level.
5. Decision-making processes and outcomes of scientific advisory bodies must be of the highest integrity: their procedures must be open, and transparent, to all stakeholders, including consumers and the organizations that represent them, particularly in respect to the selection and appointment of members, procedures and working practices, the question to be addressed and the factors to be taken into account in the decision-making process.
6. Endorsement should be given to the work of Codex Alimentarius as the generic instrument to promote harmonization of food safety and quality standards in the entire European region. Members should establish the Codex Contact Points, where necessary, and increase their participation in Codex Alimentarius work.
7. A comprehensive control of food safety and quality along the whole food chain, including internal checks of food and feed business operators, should be introduced.
8. The primary responsibility of food and feed business operators, within the limits of their own activities, for the safety of their products should be legally established.
9. Resources should be allocated to the identification and assessment of new or emerging risks associated with food. These could be due to new hazards or to increased exposure to previously identified hazards.
10. Experience with relevant and effective intervention strategies for risk management based on risk assessment should be collected, shared and communicated.
11. Multilateral and bilateral co-operation in the field of research, capacity building and education needs a secure financial basis to safeguard and promote continuous development and improvement in food safety throughout the Pan-European Region. European

- governments and international organizations should consider investment and financial support for regional cooperation in this field.
12. Cooperation initiatives for capacity building in education and information should concentrate, *inter alia*, on international standards and scientific research.
  13. Regional networks of national risk assessment organizations should be strengthened or, if absent, be established.
  14. European cooperation in food safety and nutrition research to cope with complex cross-border food safety and nutrition issues and to support policy improvement and harmonization is important. The implementation of the food and nutrition action plans of FAO and WHO should be accelerated. An effective Pan-European science and research network to support and facilitate the process of policy development and to strengthen food safety and quality knowledge across the region is needed.
  15. Consumer education on food safety and nutrition and information on food production methods and origin should be reinforced to contribute to increased consumer confidence in food products.
  16. Communication at all levels between key stakeholders in the food chain is required with the objective of improving food and feed business operators' understanding of hazards, implementation of preventive systems such as HACCP and sector-specific good practices and a better understanding of their contribution in reducing specific risks at critical points of the food chain. To achieve these objectives stakeholders should be included in information exchange mechanisms on rapid alerts and emerging issues.
  17. Government reports and submissions on policy issues to public bodies should always be published promptly in such a way as to allow interested stakeholders to comment on them.
  18. All countries should undertake an examination of commercial food safety and nutrition claims to ensure that consumers receive accurate information and are not mislead.

## **XII. ADOPTION OF THE FINAL REPORT (AGENDA ITEM 8)**

90. The final report, including the Recommendations, was discussed and adopted. The Conference agreed that the Report would be a public document and requested the Secretariat to publish it through the usual channels.
91. The Conference decided to send the Report to the Ministerial Round Table at the 23<sup>rd</sup> FAO Regional Conference for Europe (Nicosia, 29 – 31 May 2002). The Report would also be presented to the 52<sup>nd</sup> Session of the WHO Regional Committee for Europe (Copenhagen, 25 – 28 September 2002). These two meetings will consider the Report at ministerial level and decide upon priority activities to follow up its recommendations. The Conference noted that OIE was regularly invited to FAO/WHO Regional Conferences as an Observer. The importance of involving OIE more actively in Pan-European Conferences dealing with food safety questions was emphasized.

### **XIII. CLOSING OF THE CONFERENCE**

92. The Host country was warmly thanked for its efficient organisation of the Conference and for its hospitality. The Presidency of the European Union requested the floor to express their gratitude to FAO and WHO for organizing this Conference and to Hungary for hosting it. The Chairperson then closed the Conference.

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**Annex 1**

- Agenda of the Conference	23
- Provisional timetable of the Conference	25

## Agenda of the Conference

1. **Opening ceremony** of the Conference led by the Minister for Agriculture and Regional Development of Hungary, His Excellency András Vónza
2. **Keynote address** by the Minister for Agriculture, Nature Management and Fisheries of the Netherlands, His Excellency Laurens-Jan Brinkhorst: *"Strengthening consumer confidence in food products by improving transparency and reliability of European food chains"*
3. **Presentation of Conference papers:** in the first plenary session working documents will be briefly presented and items will be determined for further discussion.

Two parallel Work Groups will be established for discussions in depth. The Work Groups will report in plenary a record of key elements, including conclusions and recommendations outlined during the Work Group discussions. Discussion papers are being prepared on the following issues:

4. **Pan-European co-operation in policy and science advancement**
  - a. *Food Safety and Quality in Europe - emerging issues and unresolved problems*  
An overview of present food safety and quality threats. A discussion should determine what measures are required to improve confidence of consumers in food products.
  - b. *Statistics of food-borne disease in Europe.* An overview of food-borne disease occurrences.
  - c. *The condition of food safety and its quality - present status, prospects of change in Poland.* Political developments and the upcoming accession to the European Union inspire the country to progress new structures for food safety and quality control.
  - d. *Examples of comprehensive and integrated approach to risk analysis in the food chain - experiences and lessons learned.* It should be determined what efforts are required at national and international level to ensure a more integrated approach to risk analysis.
  - e. *Institutional and scientific cooperation, networking and capacity building in the field of food safety and quality.* Development of institutional and scientific networks may bring about fast building up of high quality knowledge and skills capacity. An investigation of the conditions that make this cooperation work, may help others to expand their networks.
5. **Pan-European co-operation in information and communication development**
  - a. *Information exchange and networking - an Emerging Risk Identification System for Food safety and Quality.* A Pan-European approach to avoid food safety and quality emergencies may require harmonization and commitment in the whole European region.
  - b. *Information exchange and networking - the Rapid Alert System presently in operation in the European Union and its possible expansion to cover other non-EU countries.* It should be investigated how non-EU countries could benefit from this system and be more involved.

- c. An international mechanism of information exchange for food safety, animal and plant health.* A centralized database will make legal, technical and scientific information more easily accessible. It should be determined what conditions would make this mechanism useful and feasible.
- d. Consumer information and participation - interactive communication with consumers on food safety and quality.* Good communication between consumers, producers and regulators could make consumers more conscious about food safety issues and help producers and regulators to be more aware of consumer priorities.

**6. Other matters** as proposed by Conference participants.

**7. Conclusions and recommendations**

The Conference Secretariat will prepare a draft synopsis of recommendations for discussion.

**8. Adoption of the Report with Recommendations**

The final Report will be submitted for adoption and follow-up to the 23<sup>rd</sup> FAO Regional Conference for Europe (Nicosia, 29 - 31 May 2002) and to the 52<sup>nd</sup> Session of the WHO Regional Committee for Europe (Copenhagen, 16 - 19 September 2002).

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**Provisional timetable****Monday 25 February 2002****Plenary session,**  
*Hélia Conference Ball Room*

<u>Time</u>	<u>Agenda item</u>	<u>Subject</u>
09.00	<b>1</b>	<b>Opening ceremony</b>
		- Opening address by the Hungarian Minister for Agriculture and Regional Development, His Excellency Mr. András Vonza
09.10		- Opening address by the Hungarian Minister of Health, His Excellency, Mr. István Mikola
09.20		- Opening address by the Assistant Director-General Economic and Social Department of FAO, Mr. Hartwig de Haen
09.30		- Opening address by the Executive Director, Director-General's Office of WHO, Mr. David Nabarro
09.40		<b>Closing of the opening ceremony</b>
09.45	<b>2</b>	<b>Keynote address</b> by His Excellency Mr. Laurens Jan Brinkhorst, Minister of Agriculture, Nature Management and Fisheries of the Netherlands
10.15		<b>Coffee break</b>
10.45	<b>3</b>	<b>Plenary session</b>
		- introduction by the Chair
		- election of Officers
		- adoption of the Agenda
11.00		<b>Presentation of Conference papers:</b>
	<b>4</b>	<b>Pan-European co-operation in policy and science advancement</b>

<u>Time</u>	<u>Agenda item</u>	<u>Subject</u>
	4a	<i>Food Safety and Quality in Europe – emerging issues and unresolved problems</i> Mme. Dr. Isabelle Chmittelin, France
11.25	4b	<i>Statistics on food-borne disease in Europe</i> Ms. Cristina Tirado, WHO
11.50	4c	<i>System of food safety in Poland, present situation and prospects of change</i> Mr. Lucjan Szponar, Poland
12.15		<b>Break for lunch</b>
14.20	4d	<i>Examples of comprehensive and integrated approach to risk analysis in the food chain – experiences and lessons learned</i> Mr. Stuart Slorach, Sweden
14.45	4e	<i>Institutional and scientific cooperation, networking and capacity building in the field of food safety and quality</i> Mr. Cornelis Houtman, The Netherlands
15.10	5	<b>Pan-European co-operation in information and communication development</b>
	5a	<i>Rapid Alert System for food products in the European Union and its possible extension to other countries in the region</i> Mr. Patrick DeWevre, European Commission
15.35		<b>Coffee break</b>
16.00	5b	<i>Information exchange and networking – an Emerging Risk Identification System (ERIS)</i> Mr. Edwin Hecker, The Netherlands
16.25	5c	<i>A mechanism for the exchange of official information on food safety, animal and plant health</i> Mr. David Nowell, FAO
16.50	5d	<i>Consumer information and participation – interactive communication with consumers on food safety risks and food quality</i> Mr. Jim Murray, BEUC

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<u>Time</u>	<u>Agenda item</u>	<u>Subject</u>
17.15	<b>6</b>	<b>Other matters</b>
18.00		<b>Closing</b> of the first plenary session
19.00		<b>Reception</b> hosted by the Hungarian Minister for Agriculture and Regional Development, <i>Helia Hotel</i>

### **Tuesday 26 February 2002**

09.00		<b>Plenary Session</b> <b>Establishment of the Agenda of the Work Groups</b> <i>Conference Ball Room</i>
10.00		<b>Coffee break</b>
10.30		<b>Commencement of the Work Groups:</b>
	<b>4</b>	<b>Pan-European co-operation in policy and science advancement</b> <i>Conference Ball Room</i>
	<b>5</b>	<b>Pan-European co-operation in information and communication development</b> <i>Mercure Room</i>
12.30		<b>Break for lunch</b>
14.30		<b>Continuation of the Work Groups</b>
16.00 - 16.30		<b>Coffee break</b>
18.00		<b>Closing</b>

### **Wednesday 27 February 2002**

09.00		<b>Continuation of Work Groups:</b>
	<b>4</b>	<b>Pan-European co-operation in policy and science advancement</b> <i>Conference Ball Room</i>

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<u>Time</u>	<u>Agenda item</u>	<u>Subject</u>
	<b>5</b>	<b>Pan-European co-operation in information and communication development</b> <i>Mercury Room</i>
10.30 - 11.00		<b>Coffee break</b>
12.30		<b>Break for lunch</b>
14.30	<b>7</b>	<b>Plenary session</b> <b>Presentation of the results of the Work Groups</b> <i>Conference Ball Room</i>
16.00 - 16.30		<b>Coffee break</b>
18.00		<b>Closing</b>

**Thursday 28 February 2002**

09.00		<b>Excursion offered by the host Government (optional)</b>
13.30	<b>8</b>	<b>Plenary Session</b> <b>Adoption of the Final Report with Recommendations</b> <i>Conference Ball Room</i>
16.00		<b>Closing of the Conference</b>

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## **Background of the Conference**

### 1. Introduction

Concerns over food safety and quality are increasing worldwide. They are priority issues for governments, food producers, industry, traders and consumers alike. The burden of foodborne disease is significant in all parts of the world, and for some important foodborne hazards the reported incidence of disease seems to have increased over the last decades. In the European region, some food safety and quality problems in recent years have endangered consumers' health. This has resulted in a decrease in consumer confidence in some parts of the food supply. It has also had severe economic impact on farmers and food producers in the region. The effects of these concerns have signalled a strong need for member countries to strengthen the food safety and quality systems in a sustainable way, with a view to reducing the level of foodborne disease, to restore the confidence of consumers and to improve the conditions of food production and trade within the region and beyond.

### 2. Preparation of the Conference

After a meeting of the Steering Committee held on 13 November 2000, an FAO/WHO Conference Secretariat was installed, with its base in Rome, to prepare the Conference and related activities. At a preparatory meeting on 4 May 2001 attended by a large number of FAO and WHO members, the following guidelines were identified as possible contributions for food safety and quality improvements in the whole European region:

- a. Expand knowledge on food safety and quality parameters;
- b. Develop an integrated approach linking agriculture and agribusiness to public health and consumer protection;
- c. Develop harmonized regional food safety strategies and food safety communication networks;
- d. Increase transparency and understanding regarding food safety and quality control systems in the countries in the European region;
- e. Explore strategies on how to communicate with consumers, producers and regulators about food safety risks;
- f. Improve conditions for trade of food products within and beyond the European region;
- g. Prevent and contain health and trade implications of food safety emergencies or of deficient transparency regarding food safety hazards.



It was generally acknowledged that in order to improve food safety and quality, the whole food chain should be taken into consideration. The Conference Preparatory Meeting agreed that the two main themes to be addressed should be:

- Pan-European co-operation in policy and science advancement;
- Pan-European co-operation in information and communication development.

Several members of the region contributed to specific technical and policy Conference papers to facilitate the discussions. The Conference Secretariat reviewed the papers with the assistance of experts and specialized consultants and developed a synopsis of draft recommendations, provided by the authors of the papers. The invitees were given the opportunity to submit Conference Room Documents. Special attention was paid to obtaining a good balance of expertise and contributions from throughout the whole region.

### 3. Proposed follow-up of the Conference

As the initiative for the Pan-European Conference was taken at the 22<sup>nd</sup> FAO Regional Conference for Europe (Porto, June 2000), it was envisaged that the Final Report of the Conference including its recommendations, should be discussed at the 23<sup>rd</sup> FAO Regional Conference for Europe (Nicosia, May 2002). The Report would also be presented to the 52<sup>nd</sup> WHO Regional Committee for Europe (Copenhagen, September 2002). These two meetings should consider the report and set priorities and establish commitments to follow-up its recommendations.

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### **Opening addresses**

(original language)

1. His Excellency András Vóna  
Minister of Agriculture and Regional Development  
Republic of Hungary
2. His Excellency István Mikola, M.D.  
Minister of Health  
Republic of Hungary
3. Mr. Hartwig de Haen  
Assistant Director-General  
Economic and Social Department  
Food and Agriculture Organization of the United Nations
4. Mr. David Nabarro  
Executive Director  
Office of Director-General  
World Health Organization

### **Opening address**

by

His Excellency András Vonza  
Minister of Agriculture and Regional Development  
Republic of Hungary

Ladies and Gentlemen,

The participants attending the FAO/WHO Pan-European Conference on Food Safety and Quality are cordially welcome on behalf of the Hungarian Government and Ministry of Agriculture and Regional Development. I am delighted to greet Mr. Brinkhorst, Minister of Agriculture, Nature Management and Fishery of the Netherlands, the senior officials from FAO and WHO, both being the organisations of UN, and last but not least I am delighted to greet Mr. István Mikola, Minister of Health.

I consider it a special honour to open this meeting, and I would like to use this opportunity for giving you a brief review of the status of food regulation and safety in Hungary.

As in each and every economic and political system, the most important objective of Hungary is to protect man, the consumer and to provide the highest possible quality of life for him. The demand on foodstuffs, which are of good quality, safe for consumption and not constituting any health risks, is also maintained and gaining strength continuously on part of the Hungarian consumers. For decades, the output of the Hungarian food industry has been exceeding domestic demand, and a considerable part of this production is sold on the markets of the most developed countries. These markets also raise ever increasingly stricter requirements.

It was during the second half of the nineteenth century that the first legislation on public and animal health was passed, and the order of official control was established. Since then these have been developing continuously, in an organic integration. The primary goal was to hinder any adulteration of foodstuffs, control their hygienic conditions, protect livestock from epizootic diseases which may cause remarkable damage to the national economy and prevent the contraction of any human diseases (zoonosis) of contagious origin and related to the epizootic diseases. Both the regulation and the control system have been developed continuously. Regulations on chemical contaminants in foodstuffs, pesticide residues in plant products, radioactive contaminants, the composition and harmful substances of animal feed have been continuously issued from the fifties onward. In relation to these, monitoring systems were established the sampling and laboratory background of which have also been continuously developed.

When defining the specifications and systems of public health, animal and plant health, animal feed and food control, Hungary has never failed to observe the relevant international specifications. This

country has actively participated in the work of all the competent international professional organisations for decades, which offers an opportunity for efficient and professional exchange of information, getting immediate knowledge of the latest specifications on test methods, and contributing to their establishment. It is of special importance in the field of food safety that we have a continuous and active participation in the work of FAO/WHO *Codex Alimentarius*.

By submitting an application for EU membership, Hungary has assumed the commitment to fully adopt and apply the *acquis communautaire*. Within this framework, the Hungarian Government and the policy makers have been continuously making efforts to have a fully developed and enforced system of food safety complying with the EU requirements by the date of accession.

Accordingly, the establishment of a uniform system of legal framework and control concerning food safety is taking place continuously. From the second half of the nineties, the intensity of legal harmonisation and the further development of the institutions, which was partly implemented through the aid from PHARE, have increased. The Government uses the tools of economic policy to provide support for agricultural producers, the food processing and marketing sectors to comply with the increasingly stringent food safety requirements.

EU food legislation has been incorporated into the Hungarian body of food legislation on the following three levels:

The acceptance in Hungarian food law of the EU legal framework on food law has been integrated at three levels:

- Acts (act on foodstuffs, act on animal health, act on the protection of and forbearance to animals, animal feed act, act on plant protection, health act, consumer protection act, etc.);
- Governmental and Ministerial Decrees issued pursuant to the authorisation provided on act level;
- the specifications for foods in *Codex Alimentarius Hungaricus* and for the animal feed in *Codex Pabularis Hungaricus*.

Legal harmonisation **concerning foodstuffs** started in the first half of the nineties and was practically finished by 2000. This was possible, because as a consequence of the advanced status of our food industry and our active participation in the international organisations, a remarkable portion of the Hungarian specifications had been up-to-date before the harmonisation started. The only outstanding task in connection with Hungary's accession is to adopt new legislation, which is happening continuously. In accordance with the prevalent practice of member States, amendments to EU regulations become applicable in Hungary within half a year following publication. Clearly, the same holds true for food safety regulations as well.

During the screening of the **animal health legislation** and the related technical consultation with EU experts, the parties established that a substantial part of the EU *acquis* on animal health had been adopted.

For the most part, bringing into force was accomplished in 2002. Exceptions are the provisions with direct relevance to the Single European Market. The application of these will only become possible after the date of accession.

The publication of the ministerial decree providing for a full-scale harmonisation of the **plant health acquis** is expected to take place in the first half of 2002 with bringing into force being on the date of accession.

**Hungarian legislation on animal feed** have been partly harmonised. . Most of the specifications are to be adopted within the framework of *Codex Pabularis Hungaricus*. The incorporation of the directives on ingredients, animal feed additives, composite animal feed , complementary animal feed and animal feed produced for special purposes will be accomplished during this activity

The Government's general co-ordinating tasks in relation with food safety are primarily assisted by interdepartmental committees, such as the 'Advisory Body on Food Safety' and the 'Interdepartmental Committee for the Accomplishment of Food Control Co-ordination Tasks. The Hungarian Government is planning to have the work of any domestic institutions engaged in food safety co-ordinated and controlled by an institution of nation-wide competency, the **Hungarian Office for Food Safety**, which is to be established in 2002. The responsibilities of this institution will be similar to the responsibilities of the European Office for Food Safety , and will work in close co-operation with that. The institution will, among others, provide a synthesis of the findings of tests and inspections concerning food safety, make proposals for decisions following their assessment and analysis, and ensure the co-ordination of a system of quick response in this field .

Since a substantial part of hazards in food safety cannot be directly observed by consumers, in addition to the means of governmental food regulation and the practice of sanctioning, the risks could be moderated primarily through the continuous development of a consumer's pool of knowledge.

Like in other countries, the launch of the communication programs for consumers has been started in Hungary in recent years. In these programs an outstanding role is given to the issue of marking foodstuff .

Raising the level of food safety is playing an increasing role in determining competitiveness in the food market. An evidence to this is that an HACCP system is becoming a basic requirement. Hungary has made considerable efforts to introduce HACCP.

The joint 1999 decree by the Ministries of Agriculture and Health made it mandatory for food - producers to apply the five principles of HACCP from 1 January 2002. As of 1998 the Ministry of Agriculture and Regional Development has been providing producers with an aid covering 50% of the costs of the introduction. Until now, more than 2000 food producers – about 30% of the companies in operation – have introduced the HACCP system. Since these are mostly large- and middle-size plants, this means that about 80% of the outcome of Hungarian food production is marketed with the application of the HACCP principles. With the continued financial support, small businesses are expected to introduce the system during the coming years. The development in 2003 is expected to be implemented with the contribution of the SAPARD programme.

What I have intended to show you with this brief review is that Hungarian food regulations are aimed at ensuring food safety and thereby their market success through continuous adjustments to

the recommendations of FAO/WHO *Codex Alimentarius* and the specifications of European Union all the time.

Before I finish, I would like to express my thanks to the Dutch Government, who initiated this conference, as well as the specialised organisations of the UN (FAO, WHO) and the professionals preparing the work materials, for their co-operation in arranging and implementing this conference. Furthermore, I would also like to thank the organisers both on part of FAO and the host country who have spent months on preparing this conference. I hope that we do manage to provide the appropriate conditions for your work this time again.

I wish you a fruitful work, useful professional meetings and successful workshops. I believe that your efforts will considerably contribute to increasing the standard in food safety of this region and thereby protecting the consumer's health and also improving the quality of life.

Finally, I wish every honourable participant good work and a pleasant stay in Budapest.

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### **Opening address**

by

His Excellency István Mikola, M.D.  
Minister of Health  
Republic of Hungary

Distinguished Delegates, ladies and gentlemen,

It is a great pleasure and honour for Hungary to be host country for the Pan-European Food Safety Conference organised by the Food and Agricultural Organisation and the World Health Organisation.

Food safety in the past was often, but not always, addressed as a public health issue. In recent years, because of a chain of events comprising large-scale food related crises of various degrees of severity, public confidence in the safety of our food supply has been shaken and the issue of food safety has come to the forefront all over the world. However, the real burden of disease arising from food presents an even more important issue.

According to the latest data of the World Health Organisation, the incidence of diseases associated with food consumption is increasing globally. Most food-borne infections are zoonotic throughout the world. However, in addition to the well-known and frequently occurring diseases, there are also some new types of food safety threats. We are all concerned about the new type of human spongiform encephalopathy associated with 'mad cow disease' in cattle, the health risks of new technologies as for example in genetically manipulated foods, and the long-term health impacts of chemicals (e.g. dioxins, pesticides, mycotoxins) that find their way into the food chain. We highly appreciate efforts by the World Health Organisation, the Food and Agricultural Organisation, as well as the European Union in addressing food safety issues.

It is important to observe that food safety is closely associated with nutrition. Ensuring the protection of public health is not restricted to the chemical, biological and physical safety of food. It should also aim at ensuring the intake of essential nutrients while limiting the intake of other elements in order to avoid adverse health effects, including anti-nutritional effects. Scientific information has shown that an adequate and varied diet is a very important factor in maintaining good health and overall well-being. This is particularly true now that new types of products are appearing on the market with modified nutritional value, which can influence the behaviour and well-being of consumers either favourably or unfavourably. In addition, the information which would allow the consumer to make the correct choices is not systematically available in a clear and accessible way. The WHO and European Union action plans cover both topics.

In Hungary the Ministry of Health has worked actively on food safety and nutrition for almost one hundred years. Through the Medical Officer's Service, the public health sector has always been participating in the control of food production and distribution in Hungary.

The National Public Health and Medical Officers' Service is an organisation of nation-wide powers that performs state tasks and has the broadest authority. The Public Health Service exercises supervision over the public health and epidemiological conditions of the country, including the supervision of food safety. It is an organisation committed to the improvement and protection of public health and thus is independent of economic interests.

The food safety and nutritional health duties falling within the competence of the Ministry of Health are specified by Act CLIV of 1997 on Health. In addition to providing other functions, this Act empowers the Ministry to establish microbiological, chemical and radiological limits for foods and the public health requirements for food production and distribution, and to ensure the prevention and investigation of food-borne toxins and infections.

The notification of food-borne toxins has been compulsory in Hungary since 1952, and since 1960 processed and summarised data have been available. Such toxins and even the suspicion thereof must be reported by the observing physician and the manufacturer or distributor of the food containing the toxin.

After the investigation, data are sent through a well-structured and regularly operated registration and reporting system to the National Institute of Food Hygiene and Nutrition. This public health institution is the contact point of the WHO Surveillance Programme for Control of Food-borne Infections and Intoxications in Europe, and forwards the data to the WHO at regular intervals.

According to the statistics, the number of food poisoning occurrences has shown a gradually increasing pattern from the beginning of the nineties to the end of the last century. Most food poisoning events occur in private households, but the highest occurrence was observed among people using mass catering, particularly children. Most deaths occur because of the consumption of poisonous mushrooms. The majority of food infections are caused by zoonotic (animal-to-man) pathogens, mainly salmonella and campylobacter. Recently the number of salmonella infections has declined, but the number of intestinal infections of unknown etiology has shown an increasing trend.

For food-borne infections and toxins, a rapid hazard alert system is also in operation and certain especially important events must be reported immediately through the rapid system to the specified contact points. The Hungarian system of reporting and registration of food-borne toxins is reliable even by European standards.

The Hungarian Ministry of Health is well aware of the importance of food safety to public health and has taken important initiatives in this regard.

In 2001 the Ministry of Health prepared and the Government approved a comprehensive national programme, the "For a Healthy Nation Public Health Programme for 2001-2010".



The programme includes food safety and nutrition aspects that can be implemented under the co-ordination of the health administration. To this end the short-term program has set the goal of reducing the incidence of food infections and food poisoning, promoting education and training, and improving authority activities under ministerial control. To start the long-term activity program, the elaboration of a comprehensive national food safety program – based on the ‘from farm to table’ principle – is proposed, in order to address not only the need to reduce the occurrence of food infections and food poisoning, but also the handling of new challenges such as the diagnostics for new pathogens, the health impacts of new technologies, the supervision of genetically manipulated foods, etc. Improvement of the authority’s food safety control activities forms a major part of the program, as well as the integration of food safety data – now performed by different ministries – in a common monitoring and surveillance system.

To improve the health status of the population through promoting food safety, needs a range of multisectorial and multidisciplinary actions, and a holistic approach from production to consumption.

However, it must not be forgotten that the main goal of all measures and programmes is to ensure the health of the population. This is the reason why human health institutions have to have a major and determining role in food safety, in co-operation with the other concerned parties.

I hope that the Pan-European Food Safety Conference will enhance this good co-operation and will serve as a solid basis for further effective and efficient activity.

I wish to every participant a productive and interesting conference.

Thank you for your kind attention.

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### **Introductory Remarks**

by  
Mr. Hartwig de Haen, Assistant Director-General  
Economic and Social Department  
Food and Agriculture Organization of the United Nations

Excellencies, ladies and gentlemen,

Welcome to this Pan-European Conference on Food Safety and Quality. On behalf of FAO, and together with our sister agency, the WHO, I would like to thank the Minister of Agriculture and Regional Development of Hungary, for his Government's kind offer to host this important Conference here in Budapest.

I am very happy to see so many high-level delegations from countries of Western, Central and Eastern Europe present. This, indeed, is a Pan-European Conference. I am particularly glad that a large number of private sector organizations are also represented. Your broad attendance affirms that food safety and quality are matters of concern of all stakeholders in the food chain – from “farm and fisher boat to fork”.

It is our hope that this Conference - a first in Europe - will send a strong signal to all involved in the food chain for the benefit of the consumers in the region. Obviously, the Conference comes timely as many countries are in the midst of reforms and as the EU Food Authority has just been created.

#### **Key issues**

*Ladies and Gentlemen,*

The access to safe food of good quality for all people in Europe is certainly an important objective with which this Conference will deal. But, currently, the region is struggling with a number of constraints that hamper this goal.

In my view, there are three key challenges confronting the European region.

First, we must recognize that, in spite of great progress in many parts of the region, all countries face some serious food safety risks which their consumers wish to see resolved.

Secondly, the countries of the region need to find ways how to maintain the diversity of their food production systems and consumption habits while seeking to harmonise as far as adequate their food safety control systems.

And finally, there is a pressing need for better Pan European co-operation in research, information exchange and effective response to food safety risks.

## **1. Food safety concerns across Europe**

*Ladies and gentlemen,*

Today we know better than ever how to control the safety and increase the quality of food. I dare say that food has never been safer than it is today in Europe. However, this should not lead us to complacency. Through improved monitoring and reporting we are finding more and more cases of people suffering and even dying from food-borne diseases. This is unacceptable.

Several food emergencies have shocked European producers and consumers in recent years. WHO data indicate that as many as one person in three in industrialised countries may be affected by food borne illness each year, resulting in human suffering and even death in some instances. The economic cost runs into billions of dollars each year.

To mention just a few examples; not only is the spread of BSE in Europe an enormous burden on the industry. The difficulty of controlling Salmonella contamination and the pollution of food and drinking water from dioxins and pesticides are also a continuous threat to human health.

The ways how the systems can be improved are currently under review in many countries of the region and you are gathered here to exchange experience and ideas in this respect. The traditional way to control the safety of food has often been to examine the finished product. However, concentrating on just the last link in the chain has sometimes been rather costly when food was found to be contaminated and had to be rejected or disposed of. To save costs and prevent contamination, food safety must begin with good agricultural practices. There seems to be growing agreement that food safety needs to be ensured through approaches 'from farm to fork'. We in FAO agree to this and we are just finalizing guidelines on it.

In practical reality, national policies and regulations on food safety and quality are still very diverse in Europe. Food safety control systems in Central and Eastern Europe as well as in Central Asian Republics are very different from the EU. They also vary among each other and many need improvement. European consumers demand transparent and unbiased guarantees about the safety and quality of their food. Likewise, producers and processors require standards and best practices that meet the demands of consumers, while remaining competitive regionally and internationally.

## **2. European diversity and harmonisation of food standards**

The second issue confronting Europe is the desire of European countries to maintain diversity in food systems while seeking to promote higher standards of food safety and facilitate trade.

Europe is certainly not aiming for a single standard diet. The challenge is: harmonisation in diversity. Europe's cultural diversity is reflected, *inter alia*, in its variety of foods and diets. Local dietary traditions are highly valued by consumers. Food is and will remain an important element of cultural identity and diversity of Europe.

European countries account for more than one-half of international agricultural trade world-wide. Moreover, three-fourth of the trade of European countries represents exchanges between European countries themselves.

Many Central and Eastern European countries participate only marginally in this trade at the present time. But they have excellent potential for agricultural exports within the European region if they can establish and demonstrate the efficacy of their food control systems.

We note that the SPS Agreement of the WTO allows countries to have stricter safety standards than others provided these are based on acceptable risk assessments. But I would submit that common standards can help significantly to facilitate trade, both within Europe and with the rest of the world, while safeguarding food quality and safety.

### **3. Pan-European co-operation as tool for development**

The third issue is co-operation. Food safety and quality is a shared responsibility, not only between parties in the food chain but also between countries. Europe needs to discover ways of co-operation within the region to make food safer and to make food safety and quality more acceptable and transparent for the consumers all over the region.

The European Union, for example, has a Rapid Alert System to warn countries if there is a food safety emergency. Many Eastern European countries are not yet participants in this system or still do not have an alternative system for rapid alert.

But co-operation and exchange of experience can and should not be limited to Europe. The recent decision to temporarily stop imports of shrimp and a few other food items from China is a good example to underline the importance of science based and efficient food safety control systems everywhere. This was exactly the theme of the Global Forum in Marrakech last month.

### **Lessons from the Global Forum for Food Safety Regulators**

The Forum made it very clear that food safety should no longer be treated as a luxury of the rich but as a right of all, in developed as well as developing countries. There is considerable scope to reduce food borne illnesses in the world through adoption of more efficient food regulation systems. It became also evident that the regulatory process must involve all stakeholders, including the consumers. Moreover there was agreement that developing countries need urgently assistance in capacity building to improve their food safety control systems, and this in the interest of their own consumers as well as their exports. Higher quality and safety of food imported from developing countries is also in the final interest of the consumers in countries of Europe.

I do hope that this Pan-European Conference will build on the results of the Global Forum and go into more details with regard to particular problems of the European region.

## **Conclusion**

In conclusion, from FAO's point of view, I would suggest that this Pan-European Conference might wish to examine the following points in further detail:

1. European countries can still do a lot to bring their different food safety and quality control systems and their performance **closer together**.
2. Food safety control needs to comprise the **entire food chain** from farm to fork. Food safety begins at the source of production and requires involvement of all operators concerned, primary producers, processors and handlers. In this regard, agriculture and health institutions must work together to ensure food safety.
3. Risk assessment and management systems to deal with hazards in food must **be science-based**. In this regard there is particular urgency to make further progress in the area of hazards of microbiological origin.
4. **Pan-european co-operation** in research, education and capacity building are crucial to improve food safety and quality. There are large opportunities for improving exchange of research data and to link the European information systems with existing international food safety databases.
5. Pan-European participation is needed in all aspects of **food safety emergency systems**, ranging from rapid alert to rapid response.
6. Transparency, participation and openness are essential to enhance and regain the **confidence of European consumers** in the safety and quality of the food they buy.

*Ladies and gentlemen,*

FAO and WHO have jointly convened this first Pan-European conference to provide you a platform to discover the most appropriate ways to improve the safety and quality of European food supply.

The Conference Papers and Room Documents submitted to the Conference, illustrate some of the opportunities that may be taken: cooperation in food policy development, networking in science and research and the harmonisation of emergency warning systems across Europe.

Before closing, I wish to reconfirm our organisation's willingness to assist you in meeting your common objectives. Through our advice and technical assistance, various expert advisory bodies and by providing the Secretariat for the Codex Alimentarius Commission, we stand ready to assist the countries of the European region in their objective to have science based food control systems in place so as to ensure safe and high quality food for all. Let me also use this occasion to draw your attention to FAO: WFS-five years later in June in Rome this year. This will be another occasion to draw the attention of highest political leaders to the need to give food safety top priority in all countries.

I wish you success in identifying common policy priorities and inspiration in identifying opportunities of Pan-european cooperation.

**Opening statement**

by  
Mr. David Nabarro  
Executive Director  
Director-Generals's Office  
World Health Organization

On behalf of Dr Gro Harlem Brundtland, Director-General of the World Health Organization, I welcome you at the opening of this first ever Pan-European Conference on Food Safety and Quality and join my colleagues from FAO in thanking the Government of Hungary for hosting us in this beautiful and charming city.

It is right that they are at a major meeting to agree ways to lessen the harm that food can cause to people who eat it. 70% are represented by Health Ministries.

Between the 1950s and 1980s, we saw tremendous improvements in the safety of the food eaten in industrialized countries. But there has also been a substantial increase in the public's interest in, and concerns about, its food. This is particularly the case in Europe. Why?

In Western Europe we have recently witnessed a series of well-publicised crises related to food. Public perception about the safety of food supply has been shaken.

That is why, in Europe, people want answers to their questions about the food they intend to eat. Might it harm us, or members of our family? How can we reduce the possibility that we will be harmed? How is our government helping us to eat food that is not harmful? Have we the information we need to make choices about our food? Will someone else decide the information which we can access, or can we decide what we need to know to make our decisions about food?

If we look beyond the newspapers - to the results of epidemiological studies and surveillance - we find that the problem may run deeper. We should not just be worried about the spectacular outbreaks for food-related suffering, but also the vast number of sporadic cases and small outbreaks. Many of these don't make it into reporting systems. They certainly do not make the headlines.

Epidemiology also tells us that unsafe food is a global concern. Food borne illness directly affects people's well being: it also imposes strains on health systems and reduces economic productivity. Very recent estimations from the USA suggest an annual cost to that society of more than 6 billion dollars.

You will be discussing the micro-organisms that can make food dangerous. You will also examine possible chemical contaminants of food, such as dioxins and pesticide residues. Both causes are important: the statistics have already been presented by Mr De Haen. If the consumer is lucky, an episode of food-borne illness may result in some discomfort for a day or two. He or she could end up with a long time away from work and incapacity, or dead.

This indicates that food systems are not always responding well to new microbiological and chemical hazards, to shifting food consumption patterns, to urbanization, to new production methods, to new technology and even to the globalization of the food trade. The "farm to fork" chain is longer than ever. In addition, new techniques are not subject to detailed study before widespread introduction. Had this happened, BSE might have been prevented, and the public would be better informed on the risks and benefits of bioengineered foods. That is why this Conference is important.

WHO is the world's inter-governmental agency that specialises in human health. It helps governments, civil society, consumer groups, private entities, the media, and others with an interest, to access the best possible evidence about the possibility that foods can cause harm, and ways in which that harm can be minimised. This includes ensuring that policy responses are properly informed through surveillance systems and risk analysis, and helping to plan the right mix of information campaigns, legislation, or changes in the safety culture and systems within the food industries.

WHO adds value by helping to integrate different systems for surveillance of illness.

One approach is the "network of networks" on infectious diseases: through this, WHO studies all, but concentrates on key pathogens like salmonella and campylobacter.

Another approach is the Global Environment Monitoring System, or GEMS, which yields information from more than 80 countries on chemical food contaminants and human exposure. Modern food systems seek to reduce the risks that food causes harm, through responding to risk assessments. FAO and WHO have assessed the risks of chemical contamination in recent years, and the two organizations have now started on global level assessments of microbiological risk. This is a first: its initial foci are *Listeria* in ready-to-eat foods, *Campylobacter* in poultry, *Vibrio* in seafood, and *Salmonella* in eggs and poultry.

What about new technologies?

There is increasing use of modern bio-technologies in food systems. The challenge is to ensure that we all benefit from their positive features - such as boosting nutrients, decreasing allergenicity, or improving production efficiency. But we must also avoid any possible negative effects. They need to be evaluated before being taken to scale, and the evidence needs to be reviewed by a large range of groups within society.

It is sometimes said that the problems of public perception about the application of biotechnology to food result from consumers' inability to understand the issues. "They cannot compare risks between biotechnology and more traditional foods", or "They are just wrong". This line of reasoning is unwise.

We should be very careful about commenting adversely on the capacity of those we serve, to think, especially if there is no supporting evidence. Instead, we should involve all interested parties, including consumers, in risk analysis processes from the start. It must not be made too complicated for consumers, and it is up to us to improve our communication efforts - quickly.

We need clear and well-accepted standards against which new technologies can be assessed: this is becoming possible through the Codex system. The standards will help us initiate studies to analyse benefits and risks: as far as possible we should work with consumers as we do this.

### **Colleagues**

WHO's strategy for promoting food safety calls for new, evidence-based, preventive strategies in order to lower the risk that food will cause harm. The strategies can be pursued throughout the whole food production chain. Interdisciplinary collaboration all the way from farm to table is encouraged. The strategies use an open framework for risk analysis, and an ultimate emphasis on food systems that have the same objectives as public health.

This regional Conference on Food Safety and Quality supported by WHO and FAO working together. Why? Because we need to look at the issues from a multi-disciplinary perspective. For this to work, different authorities and different organizations will have to coordinate their efforts.

We wonder whether some of the high profile problems in the last decade have been the result of lack of collaboration between different national authorities. We hope that the WHO-FAO link will inspire collaboration at national level between agriculture and health.

### **Conclusion**

Now is a good time to scale up our collective efforts on food safety - to win back consumer confidence through concentrating on the evidence, implementing effective responses, initiating evidence collection and country-level surveillance, and ensuring that the issue is high on the political agenda. Now is the time for partnerships between European countries to harvest experience, and learn and develop best practice.

This is where the Pan-European Conference comes in. We have most of Europe's experts in food safety here today. We need to share our experiences - good and bad - so that future food safety systems can improve and leap-frog over past mistakes.

I wish you a successful conference, and look forward to the outcome of your deliberations in this critical area of public health.

Thank you.



### **Summary of the Keynote Address**

(original language)

by

His Excellency  
Laurens Jan Brinkhorst  
Minister of Agriculture, Nature Management and Fisheries  
The Netherlands

Minister Brinkhorst in his keynote address complimented the FAO and WHO for their joint organization of this Pan-European Conference on Food Safety and Food Quality. He supported the appeal of FAO ADG Mr de Haen for a successful World Food Summit: five years later. Mr Brinkhorst underlined the essential link between food safety and food security. He underlined that FAO traditionally focussed until now on food security. And FAO should continue to do so, he said, looking to the number of undernourished people worldwide. But looking to the developments in Europe a link between food security and food safety, which is one of the political issues in Europe, is essential. In that context FAO has a challenge for the European Region.

Europe is going through a historically important period. Through enlargement of the European Union from the present 15 to possibly 25 countries a large Internal Market is being created. On the one hand harmonization of food safety standards is at stake, on the other hand quality is at stake in terms of the wish to maintain diversity of food products. The challenge is to find a balance between harmonization and diversity.

Globally, consumer preference is shifting towards higher-quality products. In response to this, a shift of the agriculture sector, which was traditionally product-oriented, to a sector driven by demand, is needed.

A fundamental condition of enlargement is non-discrimination between farmers in the European Union and farmers in the accession countries. Consequently, a balance should be pursued between phasing in of income support to farmers in accession countries and phasing down of income support to farmers in EU-countries. Minister Brinkhorst was of the opinion that food safety plays up till now a far too limited role in the enlargement discussions. Enlargement will only be successful if consumers in the EU can trust food imports from the accession countries. Free circulation of safe food in Europe requires standardisation of food safety systems.

The minister indicated that he expected from the conference tangible results in the field of:

- strengthening of the work on Risk Analysis which will get an impulse by the creation of the European Food Safety Authority;
- support to institution and capacity building in developing countries in order to enable these countries to fully benefit from market access opportunities in Europe, which need to be increased; developed countries have a moral duty to support developing countries; it is particularly difficult for developing countries to meet European food safety requirements; however, Europe owes it to its own consumers to maintain the safety standards at high levels;
- increasing co-operation between national institutions in different European countries on science and policy, where FAO, WHO and OIE could play an important role;
- development and improvement of information and communication systems, including systems which could provide early warning of potential food safety risks; examples are the existing Rapid Alert System and the Emerging Risk Identification System (yet to be developed).

**Conference Papers**

<b><u>Document</u></b>	<b><u>Title</u></b>
PEC 01/03	Food Safety and Quality in Europe Emerging Issues and Unresolved Problems, France
PEC 01/04	Statistical Information on Food-borne Disease in Europe Microbiological and Chemical Hazards
PEC 01/05	System of Food Safety in Poland, Present Situation and Prospects of Change
PEC 01/06	Examples of Comprehensive and Integrated Approach to Risk Analysis in the Food Chain – Experiences and Lessons Learned
PEC 01/07	Institutional and Scientific Co-operation, Networking and Capacity Building in the Field of Food Safety and Quality
PEC 01/08	Rapid Alert System for Food Products in the European Union and its Possible Extension to Other Countries in the Region
PEC 01/09	Information Exchange and Networking – an Emerging Risk Identification System (ERIS)
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PEC 01/11	Consumer Information and Participation in Interactive Communication with Consumers on Food Safety, Risks and Food Quality
PEC 01/12	Draft Synopsis of Recommendations

## CONFERENCE PAPER

### Food Safety and Quality in Europe - emerging issues and unresolved problems

#### FRANCE

Food safety and quality issues are paramount in Europe, where bovine spongiform encephalopathy, resistance to antibiotics, dioxins, and concerns over technological innovations from biotechnology (genetically modified organisms) are often in the headlines. However, other lower-profile food safety and public health concerns are also dealt with by national, European and international officials: the control of zoonoses (salmonella, listeria), the detection of contaminants (mycotoxins, heavy metals), pesticide residues and accidental radioactive contamination.

These problems of food safety and public health are complex and systemic, often extending from the production environment to the end-consumer. The very identification of risk to humans is often difficult or belated, as in the case of resistance to antibiotics. These problems arise from the complexity of the food chain and are highlighted in the monitoring of each link, relating to hygiene, contaminants, presence of GMOs or some other factor. These food safety and public health issues inevitably trigger a host of juridical and economic questions over the responsibilities of producers, manufacturers, importers, exporters and public authorities on an open European market.

But the concerns of Europeans, as citizens and as consumers also transcend food safety. Consumers are adamant over their right to choose and to have the means to make informed decisions over quality of food products. They want access to more information on short or long-term risk assessment, risk control and production methods. In brief, they want to be informed and to participate in the making of policy decisions on food safety and quality, including water.

These legitimate concerns of the population and these complex and systemic problems call for a methodological framework. The effective management of risk to health needs to follow a structured approach, with anticipatory systems to detect hazards and risks, and reactive systems of control. Beyond the food safety issue, the control of food quality and consumer confidence requires new forms of interrelationship between all the players.

#### **I. Anticipatory systems to detect hazards and risks**

To be effective, anticipatory systems need to be two-pronged: surveillance of human diseases linked to food, detection of biological, physical and chemical hazards associated with food; and assessment of identified risk.

##### **1. Surveillance networks**

###### **a) Networks for the surveillance of food-borne human diseases**

The permanent surveillance of public health and examination of changes is the responsibility of the Institute for Health Surveillance (INVS), a government body answerable to the Ministry of Health. This surveillance focuses in particular on food-borne diseases.

Different surveillance systems are used to gather the most complete data possible and to have a thorough understanding of all the elements needed to adjust health policies to population needs.

Some diseases carry mandatory notification, where each case is reported and recorded and the case history studied to determine the cause. This happens with botulism, listeriosis and a group of toxic infections where entry is exclusively from food; it also happens with brucellosis and tuberculosis, where food is only one route of entry.

The national reference centres also communicate their data to assist the surveillance process. These are microbiological laboratories or epidemiological surveillance centres that have been selected and certified for their excellence. They receive microbial strains relating to their field of expertise, which they classify according to type. They liaise closely with their counterpart national reference laboratories working on foodstuffs, thus further enhancing the surveillance of pathogens and helping alert the authorities to the existence of an emerging hazard. The national reference centres also work with the European and world laboratories and surveillance institutions.

This surveillance mechanism also includes the participation of a network of hospital laboratories and services, particularly for diseases where notification is not mandatory. The purpose is to track the evolving patterns of a disease and to identify its epidemiological characteristics. Each episode reported by the network is usually followed up with a request for further information from the clinician.

The system is completed with a network of 500 "watchdog" doctors, general practitioners spread throughout the country who send weekly reports on all recorded cases. Such a network operates for example for acute diarrhoea.

Finally, when considered necessary, the Institute for Health Surveillance organizes limited-duration epidemiological investigations to determine prevalence among a population group or to identify exposure factors predisposing to the disease in question.

These various arrangements are complementary and interactive, and thus under the coordination of the Institute for Health Surveillance, which gathers, processes and publishes the data.

The population is regularly involved in the investigation process, not only as patients but also as healthy volunteers, for the purpose of comparison. Every precaution is taken to ensure a person's anonymity, as required by French legislation.

The findings and recommendations are disseminated to the health professionals, who can convey the information to their patients. These data are communicated to the authorities responsible for the control of foodstuffs (agriculture and consumer affairs) in accordance with the cooperation protocol defining the type of information to be exchanged between these administrations, which also co-manage food alerts. The French Agency for Food Safety (AFSSA) also receives

information that could help its mission to assess food risks, as do the European Commission and the World Health Organization.

**b) Network of surveillance and control of biological, physical and chemical hazards linked to foodstuffs (animal, plant)**

France has both surveillance plans and control plans. The surveillance plans mainly involve assessing overall consumer exposure to risk, and are based on strict random sampling. The control plans deal with non-compliance and fraud, and employ targeted sampling.

These plans are put into effect by the local services of the Ministry of Agriculture (Food Directorate, DGAL) and of the ministry responsible for consumer affairs (Directorate of Competition, Consumer Affairs and Fraud Control, DGCCRF). A control coordination protocol between the two administrations envisages the mutual and prior communication of their prospective control and investigation plans of national interest to food safety. There is also a coordination unit to validate their respective proposals in case of appropriation by the AFSSA. In the areas of shared responsibilities joint surveys can be programmed for these subject areas.

The control plans and surveillance plans are put in place at all stages of the production and supply chain: processing of raw materials, manufacturing of foodstuffs, distribution and importation.

The network arranges for this work to be done by the eight laboratories attached to the DGCCRF - (ministry responsible for consumer affairs) as well as the departmental veterinary laboratories and the AFSSA (French Agency for Food Safety) national reference laboratories used by the DGAL (Ministry of Agriculture).

Finally, the French Research Institute for Ocean Utilization (IFREMER) and the Water Authority together monitor the quality of coastal catchment waters impacting on the sanitary quality of selected fish products.

## **2. Risk assessment**

It is therefore important that risk assessment - which helps the risk manager take decisions, including the drafting of food safety legislation - should meet several criteria: be based on useful and available scientific and technical information; result from top-calibre expertise; be as objective as possible; and, in particular, be transparent without links to economic lobbies.

**a) Risk assessment must be based on solid scientific evidence**

France has a number of bodies involved in food safety research and assessment:

- The National Institute for Agricultural Research (INRA) which has long-standing relations with the National Institute for Health and Medical Research (INSERM) and related university hospital teams. A wide variety of works have been pursued in chemical and biological fields related to food safety. These have focused mainly on microbiology and hygiene, and have sought to optimize the

role of useful micro-organisms and to reduce the impact of harmful ones. At the same time, INRA has reflected on its missions of surveillance, forecasting and expertise and gives priority to the development of risk analysis and support to decision-making. It has also decided to increase its resources for human nutrition and the link between food and health by 40 percent in the next four years.

- AFSSA, with its 13 national specialist laboratories, is a centre of research and technical support for food safety;
- IFREMER is especially active in the field of virology and epidemiology of viral gastro-enteritis of food origin associated with the ingestion of shellfish. Progress in understanding the genomes of Norwalk-like viruses facilitates their detection in clinical and environmental samples;
- INSERM conducts studies on cancer and food-borne diseases. It also conducts social investigations (nutritional deficiency, obesity), some dealing with hazards associated with food safety (dioxins).

#### **b) Effective scientific assessment, interactive with but independent from management**

Certain countries or regional interest groups have decided to separate risk assessment from risk management (while maintaining the degree of connectivity needed for a pragmatic approach) in order to ensure the independence and transparency of this high-calibre scientific and technical support. Such an approach is also internationally recognized, with the Codex Alimentarius calling for a functional separation of risk assessment and risk management.

French legislation established a scientific expert structure in 1998, the French Agency for Food Safety (AFSSA), which is charged with assessing health and nutritional risks from food and feed, including risks from water for human consumption. It is also responsible for providing scientific and technical support for the drafting of regulations. This body has a broad scientific remit as regards food safety, extending from farm (animal and plant products) to table.

It is organized in the form of expert committees on nutrition, microbiology, biotechnology, transmissible sub-acute spongiform encephalopathies, chemical and physical residues and contaminants, animal feed, contact materials, technological additives, aromas and ingredients, animal health, and water. The AFSSA is under the triple supervision of the Ministries of Agriculture and Fisheries; Economy, Finance and Industry (consumer affairs); and Employment and Solidarity (health), and provides independent scientific opinions. The members of its expert committees are appointed after public call for nomination to ensure their independence.

French risk managers work closely with the AFSSA, which has to be consulted over any change in food safety regulations. AFSSA can propose any measure it considers necessary to safeguard public health. The AFSSA also plays a role in surveillance and alert. It has a duty to inform and must be transparent, and its opinions and recommendations are made public. It has no controlling authority.

**c) Cooperation between national and regional assessment bodies**

This division between risk assessment and risk management will be consolidated at European Community level in early 2002 with the establishment of the European Food Authority, which will be responsible for assessing risk, while the European Commission and the Council will be responsible for risk management. The future European Food Authority will work in tandem with the network of risk assessment structures of the Member States so that its expertise can provide a useful contribution to food safety and thus to the prevention of serious crises in the Community.

**II. Reactive control systems**

To be reactive, control systems need to cover the whole food production and distribution chain and to be based on cooperation of all the players: those producing, processing and selling foodstuffs, the control authorities and consumers.

**1. Responsibility of the food operators**

Food operators have primary responsibility in placing their products on the market, and are involved in food safety in a number of ways.

**a) Obligatory verification on the part of the food industry**

Current regulatory texts, in particular the Code on Consumption and the Rural Code, stipulate that those responsible for placing a product on the market (importers, manufacturers) have to ensure that it conforms with prevailing requirements regarding people's health and safety, that trade practices are fair and that consumers are protected. This internal control mechanism also applies to distributors for their part in the process. The companies therefore need to put in place an internal verification mechanism that is effective, relevant and reliable in detecting inadequacies in their production systems that can affect product safety or quality. They must therefore put in place a mechanism that will monitor and control their production process; and effectiveness of this mechanism has to be validated by having their products checked for compliance by laboratory analysis inside or outside the company.

Companies can have their own analytical laboratories accredited to give their findings greater credibility, thus enabling them to give guarantees of reliability and transparency that are recognized by the controlling authority and by their own clients.

**b) Instruments available****Guides on good hygienic practices**

In France, many sectors have produced guides on good hygienic practices recommended by the risk manager (French and European Community regulations). These guides have been prepared by trade associations and validated by the relevant authority on the basis of the scientific opinion of the



AFSSA. They are based on implementation of the HACCP system, which helps determine preventive measures of control and surveillance of specified risks.

#### Standardization and harmonization of methods of analysis

French and European standardization has long targeted the harmonization of food analysis methods. The standards indicate a willingness to subscribe to a number of commitments, and many enterprises therefore voluntarily provide technical specifications on their products, manufacturing processes or methods of analysis and control. This is widespread practice in France, and the French Agency for Standardization (AFNOR) coordinates the drafting of the resulting standards.

#### Certification

This is a voluntary system for the certification of a company's quality control system. In France, certification is carried out by an independent and accredited agency and over 1000 French agro-industrial plants now have a quality assurance certificate resulting from implementation of the ISO 9000 standards.

#### Traceability of products

There are procedures for the timely recording of information and the identification of products or batches of products. These help trace the origin of a product or batch of products and determine the production and distribution conditions. Traceability is an essential component of quality assurance or product certification and is increasingly practised by French agri-food enterprises.

## **2. General principles of controls conducted by official control services**

### **a) An integrated approach to controls**

Food safety now requires attention to all aspects of the production chain, from primary production (including animal health and protection) and production of animal feed to final distribution to the consumer. Each element, including the product environment, can impact on food safety.

*Thus, for example, in the case of the dioxin crisis in Belgium in 1999, it was shown that the heavy dioxin contamination of certain animal products was due to animals ingesting dioxin present in their feed following accidental pollution. In another example, the discovery of salmonella in food can result not only from problems of hygiene in the agro-industry, but also from contamination by this pathogen of the originating livestock.*

This integrated approach facilitates the circulation of information, decision-making and the implementation of controls. It provides for better coherence and effectiveness, not only of the epidemio-surveillance systems (i.e. the gathering of information on human and animal diseases), but also of the measures to control zoonoses (e.g. salmonellosis) or the food contaminant surveillance plans. This system approach is essential in risk management linked to bovine spongiform encephalopathy, requiring coherence of monitoring from farm (epidemio-surveillance)

to table (traceability of meat), through the abattoir (for example, withdrawal of specified risk materials). Traceability is an important tool in this approach.

## **b) Traceability**

Traceability is an essential component of food safety assurance. When a hazard emerges (e.g. a toxic food infection), the risk manager must be able to find the defective food, to rapidly implement the targeted withdrawal of dangerous products, to inform consumers and food control officers, and, if necessary, to go back through the whole food chain to identify the origin of the problem and take remedial action.

Traceability therefore helps risk managers limit consumer exposure to risk and the targeting of products with risk limits the economic impact of the remedial measures on businesses. To be effective, the traceability system needs to embrace every stage of the production process, from live animal or raw material to finished product, from livestock farm to food industry, including feed manufacturers.

*All cattle are identified in the European Union, with the computerized (ANIMO) system tracking the movements of animals within the EU. When animals are slaughtered, the abattoir notes the animal data in its records and has a system of traceability enabling it to link carcass to animal. The carcasses are stamped to identify the abattoir of origin. Meat for the market has an accompanying document stating the establishment of origin and the establishment of destination. This system is repeated at each subsequent level of product processing.*

## **3. Cooperation between official control services**

### **a) At national level**

Cooperation between control services can be illustrated by the control of listeria.

*In France, the surveillance of listeriosis is done through the National Listeria Reference Centre (Institut Pasteur of Paris - IPP) which centralizes and characterizes the strains of Listeria Monocytogenes originating from private and public laboratories, and through the mandatory notification by doctors in the local services of the Ministry of Health. From the questioning of patients or their relatives on food habits, officers from the veterinary services and local consumer affairs services might decide to inspect the refrigerators of the patients or points of purchase. Cross-checking different food habit inquiries serves to identify common elements (foods, display cases, etc.) among patients infected by similar strains and thus helps trace a common source of contamination. This analysis is conducted by the Institute for Health Surveillance (INVS). Investigations into group cases of listeriosis are coordinated at national level by an investigation coordination unit comprising representatives of the Ministry of Health, the Ministry of Agriculture, the ministry responsible for consumer affairs, the IPP and the INVS.*

**b) At regional level**

Cooperation between regional control services is vital, especially when health problems occur, as it helps increase the promptness and effectiveness of risk management measures.

*One example of this was the handling of the dioxin crisis in the European Union. This crisis broke out in late May 1999, when the Belgian authorities alerted the European Commission and the other Member States to the high level of dioxin contamination of certain products of animal origin.*

*The episode had begun some months earlier in Belgium, in February, with the emergence of unusual clinical symptoms among poultry stocks. Investigations carried out by Belgian authorities linked these symptoms to animal intoxication from dioxin probably present in their feed and enabled them to identify the feed manufacturer in question, as well as the establishment that had processed the fats used in the animal feed, which were the source of the problem.*

*The Belgian authorities then conducted traceability surveys to determine the possible scale of damage. They informed the European Commission and the other Member States and decided to destroy all the contaminated eggs and poultry.*

*The close collaboration between the authorities of the Member States concerned and the Commission permitted the quick withdrawal and destruction of products presenting a hazard to human health, and the identification of animal stocks that could have consumed possibly contaminated feed. In the specific case of France, this cooperation resulted in the following measures being taken:*

- withdrawal and destruction of possibly contaminated Belgian products then located on French territory;*

- given the introduction into France of two batches of suspect fats from the Belgian establishment that had processed the fats used in the feed causing the problem, a traceability survey was conducted on French territory to identify poultry stocks that could have consumed possibly contaminated feed. These suspect stocks were then placed under restriction;*

- withdrawal and destruction of products originating from suspect French stocks.*

*In conclusion, the close collaboration between the different Member States involved and the services of the European Commission permitted a relatively rapid reduction in consumer exposure to the risk. No adverse impact on human health from this contamination has so far been identified, which tends to suggest that the measures taken were effective.*

**4. Cooperation between official (public) and producer (private) control services**

Cooperation is essential, especially for the management of food-based alerts and crises. Interaction between the control and own-check arrangements of the food industry and the national surveillance of sanitary quality of food by the public authorities helps reinforce the quality and safety of food products. The management of alerts and crises requires effective coordination among all players so that the imperatives of safety and the legitimate demands of consumers can be met, and the adverse effects or damage to the production process limited as much as possible.

The management of alerts and crises therefore requires cooperation between the authorities directly responsible (Ministry of Economy, Finance and Industry, Ministry of Agriculture and Fisheries, Ministry of Health) and the representatives of food manufacturers and distributors. The purpose of the public mechanism to manage alerts and crises is not to replace the arrangements or crisis management mechanism of food businesses, but simply to facilitate coordination between all parties concerned: the manufacturers, importers, intermediary users of raw materials used for the finished product, distributors, and central and local administrations.

Such situations unfold in three phases:

1. The first is the reporting of the risk or hazard, a phase that includes an assessment and exchange of information on the hazard between the parties concerned - the alert phase;
2. The second corresponds to the actual management of the non-conformity or crisis event, with the exchange of information on measures to be taken, the monitoring of these measures and their results;
3. The third phase corresponds to the end of the alert or crisis.

When considered necessary by the assessment exercise, the alert is communicated to the parties concerned through the "turnaround card" system. The turnaround card ('fiche navette') is the document that serves to transmit information on a potentially hazardous food product between the food industry and the administrative services. It has three sections: description of the event, the product, and the actions undertaken, envisaged or recommended. Its purpose is to provide each party with the information needed to address the hazard. As necessary, it can be accompanied by other information or documents to help with decision-making. It is also used to transmit updated information and situation bulletins. It can originate from the administrative services or from the food industry operators.

It transmits administrative service information to the food business: results of samples taken by the control services when these originate the alert, contact numbers of the administrative services, identification of local or national officer in charge of the case. The information exchanged between the food business and administration is strictly confidential.

### **III. How to inform and educate consumers**

Food safety and quality have become major preoccupations of public authorities, as they seek to satisfy the aspirations of French citizen consumers. Meeting consumer expectations, having all partners dialogue and ensuring better communication are the operational thrusts pursued by the public authorities.

#### **1. Concern to meet consumer expectations**

The French authorities now attach high importance to enabling citizen consumers to voice their opinions. The Parliamentary Office for Scientific and Technological Decisions thus organized a

citizens' conference in June 1998 to discuss GMO issues. In the following years, the French Government organized similar "democratic debates" in regional fora, grouping all players (citizen consumers, scientific experts, economic operators) and extending discussion to other topical areas and concerns. This was the rationale behind the "Public Hearings on Food and Nutrition" (Etats Généraux de l'Alimentation) that were organized by the French authorities throughout the country from September to December 2000. These Public Hearings constituted a dynamic and interactive process, comprising:

- a corpus of qualitative and quantitative studies by a market research institute;
- a series of workshops to highlight the major concerns of the public;
- a compendium of questions sent to the Public Hearings' Web site;
- five fora grouping local food-production operators, associations, elected representatives, health and education professionals, the public at large and the media;
- a national colloquium in Paris with the participation of the Prime Minister.

The Public Hearings on Food and Nutrition have helped clarify the food quality and safety expectations of the public at large and to publicize measures put in place to safeguard public health and guarantee the quality of foodstuffs.

## **2. Close association of all partners in interactive structures**

France has a specific forum for the discussion of food for today and for tomorrow. This is the National Food Council (CAN) which was set up in 1985 under the Ministers for Agriculture and Fisheries, Health and Consumer Affairs. The CNA includes representatives of the agri-food production system, consumers, scientists and administrative bodies. It is consulted for food policy decisions:

- adjustment of consumption to nutritional needs;
- food safety for consumers;
- quality of food products;
- consumer information on food products.

Another site for coordination between consumers and the food industry is the National Consumer Council (CNC), which was set up under the Minister for Consumer Affairs and is a joint advisory body of consumer and user representatives and representatives of economic operators.

The CNC has a dual mission:

- coordination between consumers and the food industry;
- consultation to help the public authorities with consumer policy.

These bodies provide a mouthpiece to hear grassroots opinions, to learn of emerging problems and as far as possible to forestall potential crises. They also help democratize relations between decision-makers and consumers with regard to food and nutrition.

## **3. A communication effort on the part of the public authorities**

Consumers are responsible for the hygiene of food storage and preparation in the home. They also decide on their dietary regime, so a sound education in food safety and quality is essential for good eating habits. This has spurred the Ministry of Consumer Affairs and the Ministry of Agriculture to create spaces on their Internet sites to inform and educate the public on food safety and quality.

Apart from the National Food Council and its public advisory statements, the National Consumer Council publishes reports and opinions to inform and educate consumers. For example, in 2000 it issued a report and statement on educating the young consumer and a statement on the quality of fresh fruit and vegetables on the market, while in 1999 it issued a report and a statement informing consumers on methods of preserving perishables (especially meat).

French consumers also have Internet access to the findings of surveys and studies of the Institute for Health Surveillance, and to its published articles. The focus is generally on recommendations aimed at reducing exposure to risk. More targeted information is made available to groups at risk, such as listeria prevention for pregnant women, an exercise systematically carried out from announcement of pregnancy.

The AFSSA is also involved in informing and educating the consumer by publishing its opinions and reader-friendly documents. Scientific information is made more accessible through Internet discussion groups (e.g. listeria forum, organic farming forum) and illustrations (e.g. the diet boat used to illustrate a balanced diet).

Managing the problems of food safety in Europe and thereby meeting one of the main concerns of the citizen consumer requires a structured approach that links early detection of hazards and risks and reactive control. Its effectiveness depends on close collaboration among producers, control services and consumers. This overview on food safety and quality leads to the following recommendations.

## **Recommendations**

From the preceding analysis these recommendations could be extracted:

- 1) the need to establish a national and regional network for the compilation and utilization of epidemiological data;
- 2) the need to develop multidisciplinary research networks;
- 3) the need for regional cooperation of risk assessment bodies;
- 4) the need for coordination and cooperation of official control services at national and regional level;
- 5) the need to implement a systems approach, with consideration of the environmental interaction of the product;
- 6) the need to facilitate better control of food safety and quality by the food industry, with due consideration to internal checks considered effective by public inspectors;
- 7) the need to organize public debate on food safety and quality with consumer participation;
- 8) the need to reinforce consumer education and information.

## CONFERENCE PAPER

STATISTICAL INFORMATION ON FOOD-BORNE DISEASE IN EUROPE  
MICROBIOLOGICAL AND CHEMICAL HAZARDS

## WHO

**Overview**

*Foodborne disease caused by microbiological hazards is a large and growing public health problem. Most countries with systems for reporting cases of foodborne diseases have documented significant increases over the past few decades in the incidence of diseases caused by micro-organisms in food, including Salmonella spp., Campylobacter jejuni, Listeria monocytogenes or E. coli O157 among others.*

*Chemicals are a significant source of foodborne diseases, although effects are often difficult to link with a particular food. Chemical contaminants in food include natural toxicants such as mycotoxins or environmental contaminants such as dioxins, mercury, lead, and radionuclides. Food additives, pesticide and veterinary drugs are widely used too and it is essential to assure that these uses are safe.*

*Surveillance of foodborne disease and food contamination monitoring are essential tools for risk assessment. For this reason main efforts are directed to the development of adequate methods of surveillance of foodborne diseases and food contamination monitoring to provide the necessary data for quantitative microbiological and chemical risk assessment.*

*This paper presents both data on foodborne diseases in the European Region and information on chemical contaminants, additives and residues in foods that may have an adverse impact in health. Future directions to prevent both microbiological and chemical hazards are discussed.*

## MICROBIOLOGICAL HAZARDS

**1. Introduction: Sources of information on foodborne diseases in the European Region**

The main official information on foodborne diseases from the member states of the WHO European Region has been collected by the WHO Surveillance Programme for Control of Foodborne Diseases in Europe. This Programme was launched 20 years ago as a result of the international awareness of the socio-economical impacts of the increase of foodborne disease. Currently there are 50 countries participating in this Programme. The Programme is coordinated by the BgVV, FAO/WHO Collaborating Centre in Berlin, and the WHO European Centre for Environment and Health in Rome, of the Regional Office for Europe, is responsible for the overall management.

Data and information provided by the participating countries include: general information on their surveillance systems, statutory notification (case reporting) and reports of epidemiologically investigated outbreaks. In many countries of the Region, surveillance of foodborne diseases is based primarily on statutory notifications without further laboratory confirmation or closer epidemiological investigations.

*The large differences existing in the state of development of the participating countries' surveillance systems makes it difficult to compare figures between participating countries.*

*Remarkable accomplishments have been achieved by the WHO Surveillance Programme during the last 20 years, including the introduction of harmonised definitions and standardised codes, which are used by many of the participating countries. Additionally the programme has developed a questionnaire to be used when reporting an incident and which is available in several languages. Standardisation has been a major step towards improved reporting, and the programme has been providing valuable information and data for hazard identification and trend analysis in the Region.*

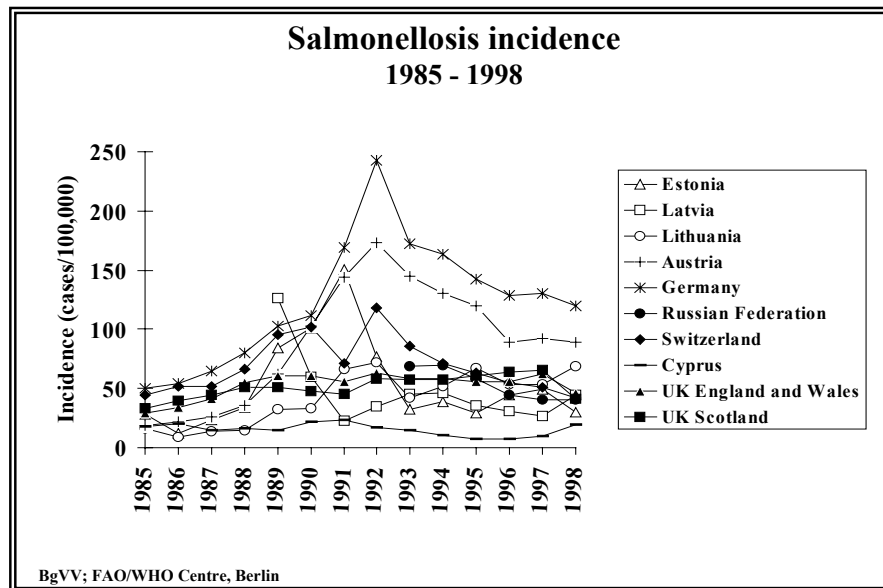
## **2. Incidence of foodborne diseases**

*Statutory notifications vary considerably within the WHO European region. Incidence rates of foodborne diseases are not comparable because national reporting, definitions and diagnostic methods are different among the participating countries. This is aggravated by the level of under-reporting; only 1-10% of cases comes to the knowledge of the official agencies and the extent of under-reporting varies from country to country.*

*Salmonellosis is still the most frequently reported foodborne disease in the region, and in most countries notification of this disease is reliable. Incidences of salmonellosis in the region have not shown a clear geographical pattern, however, there are some temporal trends. Since 1985, there has been a tremendous increase in the incidence of salmonellosis in many countries, with a peak being reached in 1992, or even earlier in some countries such as Latvia and Lithuania (Figure 1).*

Retrospectively, it can be stated that there was an epidemic caused by *Salmonella* Enteritidis, but since then the incidence of salmonellosis has decreased, due to the control measures implemented and to a greater awareness of the risk among the public.



**Figure 1:**

In other countries of the region such as Czech Republic or Hungary, the greatest incidence of salmonellosis appears after a timelag, between 1995 and 1997, and in few others the incidence of salmonellosis is still increasing. In some of the new Eastern European countries and in particular countries of the former Soviet Union (USSR), including the Central Asiatic Republics, the reported cases of salmonellosis have been relatively low or even decreasing from 1993-1998. This may not necessarily reflect a real decrease of the incidence of salmonellosis but rather that the surveillance systems in these formerly centralized USSR countries are not yet fully developed combined with the fact that in some of them the economic situation prevents the population from going to the primary health care services.

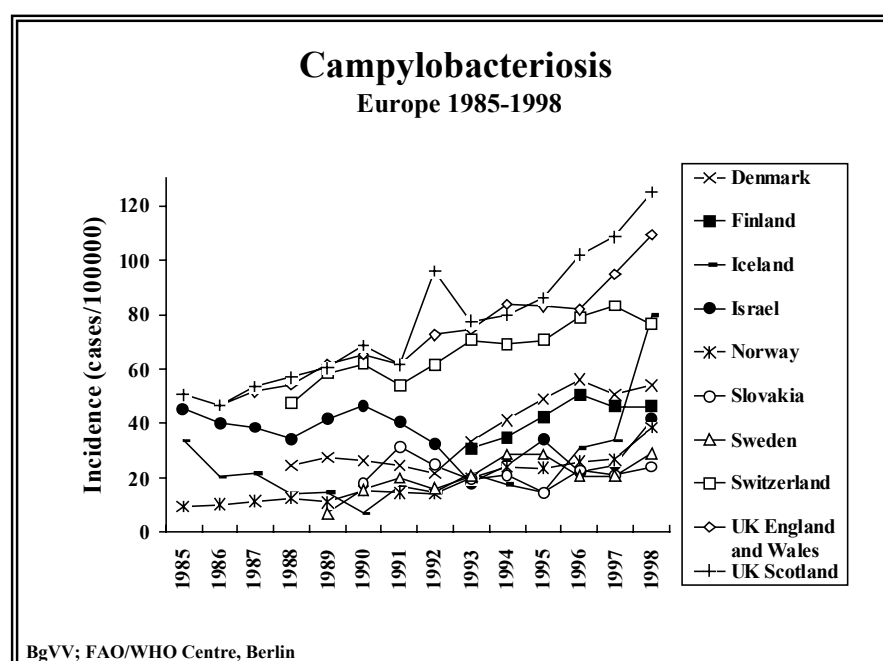
*S. Enteritidis* is the most frequent serotype found in all countries reporting, with the exception of Cyprus, and Ireland, where *S. Typhimurium* is the most common serotype. The average ratio of cases of *S. Enteritidis* to *S. Typhimurium* in the region during the early 1990s was 3:1 and currently is of 7:1. Other serotypes frequently reported in the European region include *S. Infantis*, *S. Hadar*, *S. Virchow*, and *S. Blegdam*. These serotypes are also related to foodborne disease.

While the incidence of *S. Typhimurium* has been decreasing over time since the 1980s, the frequency of reported multi-resistant *S. Typhimurium* DT-104 has been increasing during the '90s, particularly the strains showing the typical penta-resistance pattern to ampicillin, chloramphenicol, streptomycin, sulfamethoxazol and tetracycline.

Reports of campylobacteriosis' cases have been continuously increasing in the region since 1985, and currently is the most common gastrointestinal pathogen in many countries, including the Netherlands, England and Wales, Scotland, Finland, Denmark, Norway, Sweden, Iceland, Ireland and Switzerland (Figure 2). In several countries it is still unclear whether this observed rise could be attributed to a real increase in incidence, or to an improvement in diagnosis, or to both. Most

reported cases of campylobacteriosis occur sporadically, as single cases, or small family outbreaks, and are generally caused by *Campylobacter jejuni*.

**Figure 2:**



Despite the incidences of zoonotic diseases such as brucellosis, trichinellosis or hydatidosis being in general rather low in some areas of Europe, these diseases are still endemic in many areas. Brucellosis is prevalent in many Mediterranean and Eastern countries, although there has been a continuous decreasing tendency in most of them. The highest incidences of hydatidosis have been reported by the Central Asiatic Republics and the largest incidence of trichinellosis has been reported among the non-Muslim populations in the Balkan region. Trichinellosis cases reported in these areas are usually due to the consumption of products from infested boars and domestic pigs slaughtered and processed at home, without meeting the required sanitation controls.

In addition, food intoxications such as botulism remain relevant in Eastern Europe and these are frequently related to traditional ways of food preparation at home. Most of the cases reported have been associated with the consumption of home-canned meats and vegetables, and fish or meat that were smoked or cured at home. To prevent these dangerous and even fatal diseases, it is necessary that consumers in these areas are made aware of the risks, and to educate consumers in food safety matters and in how to process foods properly.

Cases of *Listeria monocytogenes* are only reported by few countries, and higher incidences are reported by countries in which communication is mandatory such as France. Also few countries provide information on numbers of *E. coli* O157 infections or haemolytic uremic syndrome (HUS) cases. Considering the large differences in the reporting systems among the countries it is still difficult to make an analysis of trends for Listeriosis or for *E. coli* O157 infections and HUS cases.

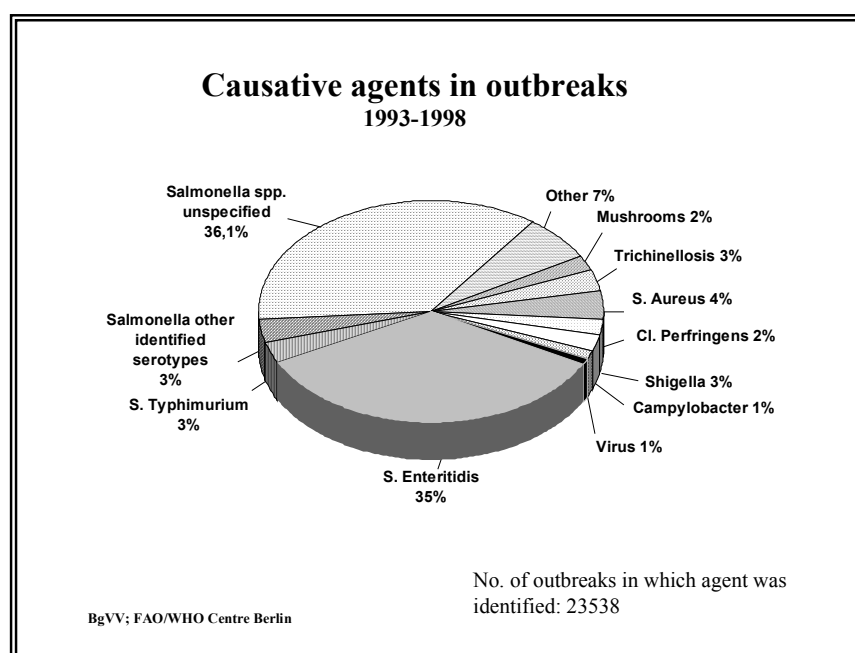
Variant Creutzfeldt-Jakob disease (vCJD) was first reported in 1996 in the UK. In contrast to the traditional forms of Creutzfeldt-Jakob disease (CJD), vCJD has affected younger patients, has a relatively longer duration of illness and is strongly linked to exposure, probably through food, to Bovine Spongiform Encephalopathy (BSE). From October 1996 to early June 2001, 95 cases of vCJD were reported in the United Kingdom, three in France and a single case in the Republic of Ireland. Insufficient information is available at present to make any well-founded prediction about the future number of vCJD cases.

### 3. Data and information from investigated outbreaks

#### 3.1. Causative Agents

More than 30,000 investigated outbreaks involving a total of 391 383 cases have been reported by 42 countries to the WHO Surveillance Programme for Control of Foodborne Diseases in Europe from 1993-1998. The causative agent was identified in approximately 23,538 outbreaks (Figure 3). *Salmonella* spp is still the most frequently reported causal agent of the outbreaks in the European region, being responsible for 77.1 % of outbreaks. Of these, more than one third were confirmed to be caused by *S. Enteritidis*. Other causative agents identified in the investigated outbreaks included *Staphylococcus aureus* (4%), *Trichinella* (3%), *Shigella* (3%), *Clostridium perfringens* (2%), toxic mushrooms (2%), *Campylobacter* (1%), viruses (1%) and other (7%). Despite the low average percentage of outbreaks attributed to viruses in the European Region several countries such as Ireland, Finland, Switzerland or United Kingdom have reported that viral agents were involved in a large percentage of the outbreaks. Currently in the UK the small round-structured viruses (SRSVs) are the major cause of general outbreaks of gastroenteritis (although outbreaks of SRSV are not only spread by food). The fact that only a 1% of outbreaks reported in the European Region were attributed to viral sources is due principally to the lack of an infrastructure for a proper routine diagnosis in many of the participating countries.

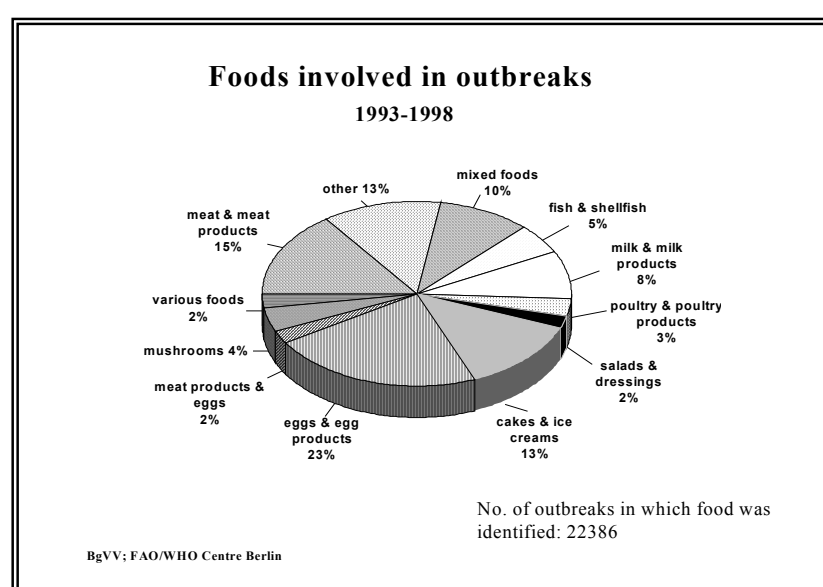
Figure 3:



### 3.2 Foods Involved in the investigated outbreaks

In the 22 386 investigated outbreaks in which food was identified, eggs, egg containing foods, mayonnaise, and products containing eggs, such as sweets and cakes, were responsible for almost 40% of the outbreaks (Figure 4). The effect of the high number of *Salmonella*-induced outbreaks in this frequency distribution is clear. Meat and meat products were involved in 15% of outbreaks, mixed foods in 10%, milk and milk products in 8%, fish and shellfish in 5%, mushrooms in 4% and poultry in 3%. Focusing on the outbreaks of *S. Enteritidis*, more than 75% of the investigated outbreaks were directly related to the consumption of insufficiently cooked eggs, or foods containing raw eggs, such as ice creams or cream-filled pastries.

**Figure 4:**



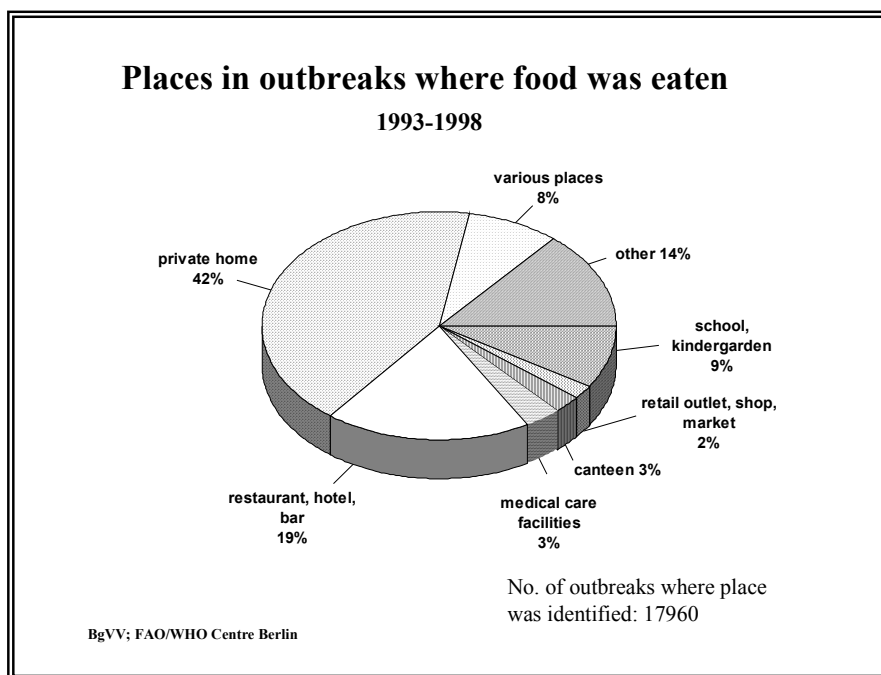
### 3.3. Places where outbreaks occur

The private home is the single location where most foodborne outbreaks occur; more than 40% of them (Figure 5). Outbreaks associated with mass catering kitchens in restaurants, cafeterias, catering services accounted for 22% of the outbreaks, schools, kindergartens and homes for children 8.7%, hospitals 3%, retail shops 2%, institutions 1.5%, homes for elderly 1% and other/various places accounted for the remainder number of outbreaks.

The frequency distribution of the places where the outbreaks occurred varies throughout the European region, depending mostly on differences in eating habits. In Poland, for example, 57% of outbreaks occur at home and these are frequently related to the preparation of dishes containing raw eggs contaminated with *Salmonella*. In Hungary, where up to 83.5% of outbreaks occur at home, many of these outbreaks are caused by intoxication from wild mushrooms cooked in the home. On the other hand, in the Netherlands, for example, the largest percentage of outbreaks is reported to occur outside the home, in restaurants, hotels or cafeterias, and an important percentage of these outbreaks is due to the *Bacillus cereus* in rice dishes served in Chinese restaurants. In Switzerland

the relatively low incidence of outbreaks occurring at home could be a consequence of the consumer education programmes launched in 1991 to reduce *Salmonella* infections.

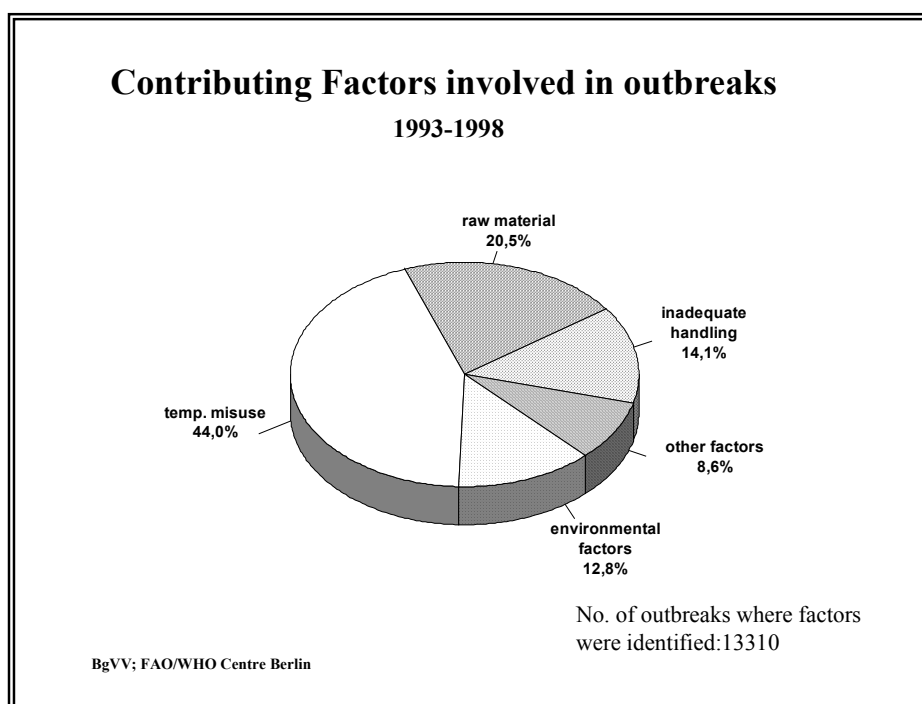
**Figure 5:**



### 3.4. Factors contributing to the outbreaks

Information on the factors contributing to the outbreaks is limited. These were identified in only a 72% of the outbreaks for which information about the contributing factors is available. From the approximately 18,000 investigated outbreaks in which the contributing factors were identified, the main contributing factor categories in order of importance are: temperature misuse, use of inadequate raw materials, environmental factors, inadequate handling and other (Figure 6). Frequently, more than one contributing factor is involved in an outbreak.

Temperature misuse was involved in 44% of the outbreaks investigated. In this category, factors such as inadequate refrigeration and inadequate cooking, reheating or hot holding, accounted for a similar percentage. This distribution varies according to geographical location. For example, in Mediterranean Countries the main contributing factor is inadequate refrigeration, whereas in the Northern countries, main contributing factor is the inadequate cooking, reheating or hot holding.

**Figure 6:**

Use of inadequate raw materials was reported in 20,5% of the outbreaks. These raw materials were either chemically or microbiologically contaminated, or contaminated ingredients (such as spices), or toxic mushrooms. Inadequate handling was reported in 14,1% of the investigated outbreaks, mostly due to cross-contamination, inadequate processing, insufficient hygiene, and the re-use of leftovers. Several environmental factors were involved in 12,8% of the outbreaks investigated. In this category, contamination by personnel was the most frequently reported contributing factor, followed by contaminated equipment, and use of inadequate rooms. The identification of this type of contributing factors in an outbreak is essential for the implementation of adequate measures for the prevention of foodborne diseases by the food industry and the catering sectors (e.g. HACCP plans) and to provide the grounds for consumer's education.

#### **4. Future directions**

In order to set priorities for future activities of national food safety programmes it is necessary to improve the evaluation of the burden of foodborne disease. In this context, surveillance of foodborne diseases should be given a high priority in the development of food safety infrastructure. Available surveillance data suggest that the frequency of foodborne disease is increasing, but disease incidence and cause-and-effect relationships should be documented.

There is a need to develop and coordinate a global approach to strengthen surveillance and to harmonize reporting systems at national, regional and international levels. In the near future WHO will initiate a Global Strategy for surveying foodborne diseases by urging Member States to set up

laboratory-based systems covering both outbreaks and endemics and for monitoring microbiological and chemical contamination.

The laboratory base should be strengthened through international laboratory networks and the epidemiological basis for monitoring disease incidence through sentinel sites for foodborne disease should be developed, especially in developing countries. Additionally there will be established common, internationally agreed formats for harmonized data collection and determine the minimal data requirements for future food safety initiatives in the regions. WHO is also planning to develop a web-based system to collect, report and communicate data from surveys conducted in Member States.

Building capacity for public health laboratories to conduct laboratory-based surveillance and for conducting epidemiologically-based surveillance are important global public health objectives. When requested by Member States, support for capacity building for data collection and survey system will be provided.

The new challenge in the surveillance area is to provide data for microbiological risk assessment, in particular for hazard identification and hazard characterization. To conduct risk assessments and implement risk management strategies to prevent foodborne diseases it is necessary to develop different structures and systems at national, regional and international levels. Main efforts should be directed towards the development of adequate methods of surveillance of foodborne diseases and food contamination monitoring, as well as the linkage between these, to provide the necessary data for quantitative microbiological risk assessment. Relevant typing systems, which could potentially be used to link human isolates to food isolates and thereby contribute to the evaluation of disease fractions attributable to different food groups, should be further investigated.

The implications of introducing risk-based strategies based on optimised surveillance data should be investigated. In general, these developments would have, as a necessary prerequisite, an integrated and interdisciplinary approach founded on improved collaboration between the sectors dealing with foodborne disease registration and food safety within the health area.

The improvement of the methods for risk assessment for microbiological hazards in food are necessary in order to provide accurate, globally representative bases for standard setting by Codex. It is essential that all countries in the European Region participate effectively in the development of Codex standards. To do so, countries must develop and/or improve their survey and monitoring methods for food contamination and intake and use these data to establish achievable international limits and recommendations for hazards in food.

## **CHEMICAL ASPECTS**

### **5. Introduction**

The contamination of food by chemical hazards is a major public health concern in Europe. The use of various chemicals, such as food additives, pesticides, veterinary drugs and other agro-chemicals can also pose hazards if such chemicals are not properly regulated or appropriately used.

Information on chemical food contamination in Europe is variable and usually not recorded in monitoring programmes. In Central and Eastern Europe food contamination arises largely from industrial contamination of air, soil and water – whether from mining and smelting activities, the energy sector, the agricultural industry or dispersal of hazardous and municipal waste. Contamination of food items usually occurs in these “hot spots” rather than contamination of food items throughout the whole country. One of these hot spots is certainly the Aral Sea Area, which is considered one of the serious examples of a natural area polluted by human activities. For almost 30 years the use of water for the irrigation of cotton monoculture and the heavy application of insecticides, pesticides like dichlorodiphenyltrichloroethane (DDT), aldrin, dieldrin and Lindane, herbicides and defoliants brought not only ecological, economic and social insecurity, but created also a serious critical situation for the health of the local population. In this region, which includes the Autonomous Republic of Karakalpakstan in Uzbekistan, the District of Kyzylorda in Kazakhstan and the District of Dashovuz in Turkmenistan, high level of DDT and other organochlorine compounds such as alfa- and beta-Hexachlorocyclohexanes (HCH), but also Tetrachlorodibenzo-p-dioxins appeared in soil, water and air as well as in every biological level of the food chain, notably in humans. A broad panel of analytes (more than 60 organochlorine and congener specific dioxins, furans and polychlorinated biphenyls) was measured in breast milk samples and in a variety of adult and infant foods collected in Southern Kazakhstan. A pilot study recently carried out in the Autonomous Republic of Karakalpakstan in Uzbekistan by Dutch scientist has confirmed these findings, showing that perinatal exposure to such environmental pollutants in the Aral Sea Area might be the principal cause of rates of anaemia, kidney and liver diseases, respiratory infections, allergies, cancer, tuberculosis higher than in other States of the former USSR. Other chemical hazards, such as naturally occurring toxicants, may arise at various points during food production, harvest, storage, processing, distribution and preparation. Furthermore, accidental or intentional adulteration of food by toxic substances has resulted in serious public health incidents. For example, in Spain in 1981-1982, rape seed oil denaturated with aniline killed more than 2000 people and disabled another 20 000, many permanently. In this case, the agent responsible was never identified in spite of intensive investigations.

Over the past 50 years, the widespread introduction of chemicals in agriculture and in food processing has resulted in a more abundant and arguably safer food supply. To protect consumers, most governments have adopted a risk assessment paradigm to scientifically estimate the potential risk to human health posed by chemicals in food. While risk assessment methods have been to a great extent harmonized, risk management approaches will necessarily vary depending on whether the chemical is intentionally added to the food supply or is present as the result of inadvertent or unavoidable contamination. In addition, the choice of a risk management option may vary among countries depending on their desired level of health protection and technical, economic, socio-cultural and other factors. In a number of cases, these differences have resulted in disruption of international food trade.

## **6. Food Additives**

Food additives comprise a large and varied group of chemicals, which have a long history of use or are thoroughly tested to assure their safety. They are added to food to improve keeping quality, safety, nutritional quality, sensory qualities (taste, appearance, texture etc.), and certain other properties required for processing and/or storage. Food additives are evaluated to assure that these



substances are used safely, which includes the precaution that a food additive should be used at the minimum level to achieve its technological effect.

### **7. Veterinary Drug Residues**

Veterinary pharmaceuticals have been a key element in increasing the production of animal derived foods. Vaccines and therapeutic drugs are essential to protect the health of confined animals, which are under more stress and are more at risk for communicable diseases. Antibacterial drugs are also given to animals in less than therapeutic doses to promote weight gain and to improve feed efficiency. Again, conditions for their safe use must be established before these substances are marketed. It should be noted that the use of antibiotics in this way has contributed to problems with antibiotic-resistant micro-organisms in humans. Therefore, some countries are now banning in animal production the use of certain class of antimicrobials that are essential for human use. Furthermore, the use of hormonal anabolic agents in meat production has proven controversial and an international consensus on these uses is currently lacking.

### **8. Pesticide Residues**

Like other intentionally added substances, pesticides are evaluated and conditions for safe use, including maximum residue limits, are established before they are introduced in agriculture. Because of their inherent toxicity, the application of good agricultural practices is extremely important when pesticides are employed. In a number of situations, foods have been found to contain high levels of pesticide residues, for example, when the crops had been harvested too soon after applications of pesticides or when excessive amounts of pesticides had been applied.

In a recent study published by the EU, the number of samples for which residues of pesticides exceeded their corresponding maximum residue limits was about 4.3%. While this increasing trend in the number of violative samples is worrisome, the more significant public health concern is for high residues of certain pesticides, which may produce acute adverse health effects. In particular, developmental and reproductive effects are of concern because these can be caused by single exposures to high levels of pesticides.

### **9. Environmental Chemicals**

A number of chemical substances may occur in the food supply as a result of environmental contamination. Their effects on health may be extremely serious and have caused great concern in past years. Serious consequences have been reported when foods contaminated with toxic metals such as lead, cadmium, or mercury have been ingested. For chemicals such as lead, human exposure is truly through multimedia, including air, water, soil and food. Consequently, significant reductions in such exposures will require the coordinated efforts a several government agencies and sectors. On the other hand, exposure to other chemicals, such as mercury, occurs through very limited pathways. Because exposure to mercury, in the form of methylmercury, is mainly through fish, several European countries recommend that vulnerable groups, including pregnant women, limit their intake of certain fish known to contain high levels of mercury.

Dioxins as well as polychlorinated biphenyls (PCBs) are among a group of toxic chemicals known as persistent organic pollutants (POPs). In the environment, dioxins tend to bioaccumulate in the food chain. The name dioxin applies to a family of structurally and chemically related polychlorinated compounds, which are mainly by-products of industrial processes and waste incineration. PCBs were intentionally produced for electrical applications and often contain

amounts of dioxins as contaminants. Dioxins and PCBs are found at low levels throughout the world in practically all foods, but especially dairy products, meat, fish and shellfish. A major incident involving elevated levels of dioxins and PCBs in animal derived foods occurred in Belgium as a result of a contaminated ingredient (recycled edible oil) in animal feed. Epidemiological investigation following an industrial accident in Seveso, Italy indicates that acute effects of exposure to high levels of dioxins include skin lesions, such as chloracne, altered liver function and a curious shift in the sex ratio of progeny to favour girls. Long-term exposure is linked to impairment of the immune system, the developing nervous system, the endocrine system and reproductive functions. Chronic exposure of animals to dioxins has resulted in several types of cancer. In June 2001, a Joint FAO/WHO Expert Committee on Food Additives (JECFA) recommended a tolerable exposure to dioxins, which is in the range of current exposure levels estimated in several European countries. However, for most European countries, data from the WHO-coordinated study of levels of dioxin and related compounds in human breast milk suggest that the trend in exposure is downward and that source directed measures have been effective in reducing environmental emissions.

Another environmental pollutant is radionuclides, although emission of these substances is largely limited to industrial accidents. The Chernobyl accident provoked great concern about the health risks to people, but these were mainly limited to people living in the vicinity of the accident and in parts of Europe where deposition occurred. In other parts of Europe and elsewhere, concern focused on contaminated foods from these areas as main source of exposure. In most cases, the estimated average dose acquired from eating contaminated foods only amounted to a fraction of the dose normally received from background radiation. At the present time, food contaminated by radionuclides with long half-lives, such as caesium 137, is the major source of exposure for people living in the Ukraine.

### **10. Mycotoxins**

Mycotoxins, the toxic metabolites of certain microscopic fungi (moulds), may cause a range of serious adverse effects in humans and in animals and have been of growing national and international concern since the 1970s. However, mycotoxicosis has been a major, but unrecognized food safety issue in Europe for several centuries. For example, St Anthony's fire is now known to be caused by a mould present on rye. Animal studies have shown that besides acute effects, mycotoxins are capable of causing carcinogenic, mutagenic and teratogenic effects. Currently several hundred mycotoxins have been identified. Aflatoxin is the most well known and important mycotoxin from an economic point of view. As fungi producing aflatoxin prefer high humidity and temperatures, crops in tropical and subtropical regions are more subject to contamination. Aflatoxins are found in peanuts, maize, tree nuts, and some fruits such as figs. Aflatoxin contaminated animal feed is also of human health concern as it shows up in tissues which are used as human food. This is of particular importance in relation to dairy cows as aflatoxin B in feed is metabolised by the animals and excreted in milk as aflatoxin M.

Other mycotoxins of concern include ergot alkaloids, ochratoxin A, patulin, fumonisin B, and the trichothecenes. JECFA has established very low provisional tolerable intakes for ochratoxin A, patulin, fumonisin B and some of the trichothecenes. In view of their presence in many foods and their stability during processing, mycotoxins must be considered a major public health concern.

### 11. Marine Biotoxins

Intoxication by marine biotoxins is another problem of concern. In many areas of the world this type of poisoning is a major public health problem, affecting many thousands of people. The most common type is ciguatera, which is associated with the consumption of a variety of tropical and subtropical fish, mainly coral fish, feeding on toxin-producing dinoflagellates, or predatory fish consuming such coral fish. However, as these fish are not often traded internationally, this is not a significant problem in Europe. However, another group of marine biotoxins produces acute intoxication after consumption of contaminated shellfish. Known for centuries, this intoxication occurs throughout the world, including Europe. Toxins causing shellfish poisoning are produced by various species of dinoflagellates. Shellfish feeding on these algae accumulate the toxins, without being affected. The shellfish most often implicated are clams, mussels, and occasionally scallops and oysters. Depending on the symptoms, different types of intoxications have been described as a result of the consumption of contaminated shellfish. These include paralytic shellfish poisoning (PSP), diarrhoeal shellfish poisoning (DSP), neurotoxic shellfish poisoning (NSP), amnesic shellfish poisoning (ASP) and azaspiracid poisoning (AZP). Recent evidence suggests that the warming of the world's oceans has altered the distribution and range of the dinoflagellates.

### 12. Plant Toxicants

Toxicants in edible plants and poisonous plants that resemble edible plants are important causes of ill health in many areas of the world. Green potatoes and tomatoes contain naturally occurring toxins and insufficiently cooked legumes may contain toxic substances. In Europe, misidentification of toxic mushrooms is by far the leading cause of illness and death in this category.

### 13. Bacterial toxins

Several toxins are produced in food as the result of contamination and growth of bacteria. These bacteria include *Staphylococcus aureus*, *Bacillus cereus* and *Clostridium botulinum*. Intoxications caused by toxins of *Staphylococcus aureus* and *Bacillus cereus* are not uncommon, but are usually self-limiting. However, botulism is serious and often fatal and specific control measures for this hazard are in place in most countries in the WHO Region of Europe. Another group of bacterial toxins are the biogenic amines, which are formed during fermentation (e.g. cheese ripening, wine fermentation) and decomposition of protein. They include histamine, tyramine, cadaverine, putrecine and others. The main significant food safety hazard is related to this is the formation of histamine in a number of fish species *post mortem* by bacterial activity.

### 14. Nutritional hazards

While some nutrients can pose a hazard by being present in excessive amounts, e.g. Vitamin A, most nutrients are of concern when they are not present in sufficient amounts in the diet. For foods that are fortified, the proper addition of the nutritional supplement becomes a critical issue for health. For example, if iodine was not present or was insufficient in iodised salt, mental retardation and other adverse effects could result in populations living in areas of endemic iodine deficiency disorders. In addition to iodine deficiency disorders, deficiencies involving several other micronutrients, such as iron, niacin, vitamin A and folic acid, pose serious public health concerns and fortification of foods with these micronutrients is being used in many countries to assure sufficient intakes. Similarly, foods for infants that comprise a significant portion of the diet must be produced with special care to assure that inadvertent deficiencies do not occur. Under these

situations, the monitoring of fortified food is an important food safety activity that should be integrated into the existing food control infrastructure.

### **15. Future Directions**

Most governments have been largely successful in protecting the consumer from chemical hazards, both those intentionally added and those occurring as contaminants. However, it is also clear that constant vigilance is essential to maintain this high standard, particularly in regard to sporadic outbreaks caused by illegal activities. The periodic failings of food safety systems to control chemical hazards, point to the need for more effective approaches for ensuring that such events do not occur. Furthermore, when such incidents occur, action must be promptly taken, including rapid and accurate communication with the international community. This has become more important given the increased awareness that terrorist threats to the food supply must be countered by efforts to strengthen prevention and response infrastructure.

With the incorporation of risk analysis principles into the development of international standards, foodborne risks must be characterized more precisely and transparently than has been done in the past. This includes strengthening of the scientific database to evaluate toxic effects, caused by both long- and short-term exposures. Endocrine disruption, neurotoxicity and immunotoxicity are three areas of growing concern. The growing rates of breast cancer in women, testicular cancer in men and brain cancer in children all suggest that further research is needed to rule out the possible contribution of chemicals in food to these diseases.

Research into the potential adverse health effects of chemicals should be accompanied by refinements of knowledge about exposure assessment in order to provide the most precise and accurate assessments of the risks posed by chemical hazards. This also serves to provide the basis for international harmonization under the World Trade Organization's Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement). Key to this is the strengthening of national capacities to conduct health-oriented, population-based monitoring programmes to assess exposure of populations to chemicals in food and the total diet.

Less developed countries must develop risk assessment and management capabilities to effectively deal with chemical hazards in food. In some countries, existing infrastructures need to be streamlined and strengthened to achieve a higher level of protection. Some countries still do not have detailed legislation to control chemicals in food or lack food control capacities to enforce such legislation. In less developed parts of Europe, the risks posed by chemicals in food are uncharacterised. Most of these countries have no monitoring capabilities and little information about the dietary exposure of their populations to chemicals in food, such as total diet studies, is available. Therefore, all less developed countries in Europe are encouraged to actively participate in activities of the international organizations, such as the INFOCRIS by the FAO and IAEA and the GEMS/Food-EURO Programme organized by the WHO Regional Office for Europe. Developed countries should offer technical and financial assistance in establishing and strengthening basic chemical assessment capabilities in less developed countries in collaboration with international organizations.

**16. Recommendations for the Pan European Conference on Food Safety**

16.1 European countries should promote and strengthen surveillance of foodborne diseases and food monitoring contamination systems and the inter-linkage between these. Developing or newly established countries in the Region should be assisted to establish their surveillance-monitoring systems and their laboratory capabilities. Intersectorial co-operation and coordination between sectors dealing with foodborne disease and contamination at the national and international level is essential

16.2 Further collaboration between the countries in the region to improve and harmonise surveillance systems, outbreak investigation, reporting systems and diagnostic methods should be encouraged. Improvement of the quantity, quality and frequency of data reporting at national level and to the WHO Surveillance Programme for Control of Foodborne Diseases in Europe.

16.3 Promote the collection of food microbiology data for risk assessment to assist the Joint FAO/WHO expert consultation on risk assessment of microbiological hazards in food (JEMRA). The outcome of such international risk assessments, as well as the methodology used for these, should be used also at national level.

16.4 Countries should improve their ability to perform risk assessments of chemicals in the food supply, and, in particular, to conduct unbiased monitoring and other studies to determine levels and trends of chemicals in food.

16.5 Countries across Europe should harmonize their data reporting formats for chemical contaminants in food as the first step in developing consistent and comparable assessments for both health and standards-setting purposes, e.g. Codex. In this regard, the GEMS/Food data structure should be considered as the default if no other format is available.

16.6 Countries should undertake total diet studies to assess dietary and other exposures to toxic chemicals by the overall population as well as vulnerable groups such as children. The consumption part of such studies will contain valuable information which will be useful also in microbiological risk assessment. In cases of localized contamination, duplicate diet studies should be conducted to assess possible exposure to unacceptable levels of toxic chemicals through food.

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## CONFERENCE PAPER

### SYSTEM OF FOOD SAFETY IN POLAND PRESENT SITUATION AND PROSPECTS FOR CHANGE

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#### **Overview**

*This paper reviews the food safety situation in Poland with an emphasis on harmonisation and changes in food safety regulation since 1989, moving towards accession to the European Union. It reviews the changes following the introduction of a market-orientated economy and how these have impacted on agriculture and food production, contributing to improved food safety. Strategies for further improvements, including the development of food safety policy and reform of food controls is discussed, indicating the future direction and emphasis for the system of food safety in Poland.*

#### **1. Introduction**

Since 1989 there have been many changes in Poland - political, economic and social. Food production systems have also changed over the past decade with the introduction of a market-orientated economy. The main challenges have been the adaptation to the legal requirements of the European Union and producers' acceptance of responsibility for food safety and quality.

In the past a number of factors restricted developments: the specific character of the Polish agriculture (mainly small farms); insufficient modernization; insufficient investment; and inadequate education of food and agricultural producers. There have been significant changes and improvements in all these areas in recent years.

The results of official controls and quality testing of food products reinforce these improvements, showing that chemical and microbiological risks to public health have been reduced over the past five years. Pollution of soil, water and food has also diminished over this period. However, further improvements are necessary, especially in the quality of foods of animal origin.

The national authorities in Poland (the Ministry of Health, the Ministry of Agriculture and Economy) are collaborating in the development of a strategy and policy for health protection, within an integrated Europe. Emphasis is given to the improvement of food quality and safety from field to table, dietary habits and nutrition, and prevention of food-borne diseases and diet-related

health disorders.

Reform of the existing (seven) systems of official food control in Poland that deliver and monitor food safety are ensuing to ensure that the challenges of delivering safe quality food can be met efficiently and expediently in the new climate. The current dispersed system is in the process of restructuring towards an optimised and centralised system. It is anticipated that a new Food Authority will also be created, and that within two years the unified system of food control will be governed by the Ministry of Health.

### **1.1 Harmonization of Regulations**

The process of harmonization of legal regulations with the requirements of European Union (EU) has contributed to food safety improvement. For example, over the past seven years since adopting EU rules for the production of raw milk hygiene, standards have improved three fold; the adoption of EU regulations on infant formula and follow-on foods has contributed to improved standards of these important foods, up to the same safety and quality levels as the EU.

Poland also takes into consideration the development of food safety systems and principles proposed not only by the EU, but also those laid down in Codex Alimentarius, following the “Food and Nutrition Action Plan” of the WHO European Bureau, and the suggestions of OECD expert groups.

### **1.2 Public health risk reduction programmes**

Three research institutions<sup>1</sup> have formed a consortium to undertake a programme (2002-2004) concentrating on public health risk reduction, through the identification and prevention of biological, chemical and physical threats in the (human) environment, including food, and emergency situations. Specific threats include chemical stresses endangering the natural environment and consequent effects on water, food, environment and human health, and widespread human exposure to low-level ionizing and non-ionizing radiation.

The programme was initiated as a result of observing the current epidemiological situation and, the appearance of emergency situations, including those threatening food safety. It will concentrate on:

- Public health risks from biological factors
- Chemical and physical safety of the environment
- Food quality and safety versus health
- Prevention of diet-related diseases
- Strategic policy in public health.

### **1.3 Changes in emphasis in food safety**

There have been numerous transformations aimed at improving the functioning and development of an improved food safety system in Poland in recent years.

The present actions for improvement include:

- implementation of new legal regulations on food safety and quality, in agreement with both EU and Codex Alimentarius requirements
- implementation of quality assurance systems in many food production plants

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<sup>1</sup> The State Institute of Hygiene, Food and Nutrition Institute, and Military Forces Hygiene and Epidemiology Institute.

- further restructuring of the official food control system leading to better integration of services
- national monitoring of contaminants (likely to cause a health risk) in parallel with nutritional surveillance of diets and biochemical tests, to give the full picture and magnitude of food and nutrition risk factors at population level
- scientific research development within the European Union Fifth Framework Programme dedicated to food safety
- the development of an Agriculture Knowledge system (particularly graduate and postgraduate education) in the area of food safety and quality.

In addition, there has been development of a Polish food safety strategy, with emphasis on the application of systemic solutions. The task is to prepare<sup>2</sup> a strategy for government administration of a coordinated system of actions to ensure adequate quality of food. In particular, supervision of the production of agricultural products for foods and feeds with consideration of European Union requirements, alongside developments of the European Food Agency.

## 2. Present situation in Poland

### 2.1 Population

Poland is a country of 312,685 square kilometers with almost 39 million people, 62% living in towns and cities, and 38% in rural areas. The demographic structure shows the population is relatively young compared with most European Union countries. Nearly 58% of the population is below 40 years of age; those aged over 60 make up 16.54% of the population.

The proportion of people occupationally active and working in agriculture, (compared with EU countries) is presented in Table 1. In Poland 23.3% of all working people are in occupations related to agriculture and forestry, compared with a fifth of this number on average (4.8%) in EU countries. In this respect Poland resembles the situation of certain EU countries (such as Germany or France) 40 years ago. These figures show that the process of demographic and social changes in Poland, with workers in agriculture moving into employment in other areas of the national economy, is not dynamic.

**Table 1: Occupationally active population working in agriculture**

Country	Working in agriculture thousands		Occupationally active population in agriculture as % of all occupationally active population	
	1990	1997	1990	1997
EU	10,871	8,492	6.4%	4.8%
Poland	5,146	4,569	27.5%	23.3%

<sup>2</sup> In consultation with the ministers for public administration, agriculture, health, agricultural markets and the President of the Office of Protection of Competition, and Consumers.



Source: GUS. Agriculture Statistical Yearbook. Warszawa 1998

## 2.2 Employment in the food industry

Further progress and development of the food industry is essential for processing agricultural products and meeting the nutritional needs of consumers. The average number of workers employed in the food industry in 1997 (Table 2) shows that the greatest number of workers were employed in the production and processing of meat, in the production of bread and fresh bakery products, cakes and pastries, and dairy products. Employment was lowest in potato processing, production of oils and vegetable or animal fats, wine and other distilled drinks.

**Table 2: Average employment in food industry in 1997 by work type<sup>a</sup>**

Specification	Average employment in food industry	
	thousands	%
<b>Total</b>	<b>498,8</b>	<b>100</b>
Production, processing and preserving of meat and meat products	114,2	22,9
Processing and preserving of fish and fishery products	13,1	2,7
Dairy products production	61,3	12,3
Production of cereal products, spaghetti, noodles and similar flour products	19,6	3,9
Production of bread and fresh baker's products, cakes and pastries	62,9	12,6
Production of sugar	26,5	5,3
Potato processing	4,6	0,9
Production of fruit and vegetable juices, processing of fruit and vegetables, other not classified elsewhere	41,5	8,3
Production of oils and animal or plant fats	5,0	1,0
Production of biscuits and rusks, production of prolonged duration pastries and cakes, cocoa, chocolate and confectionery	40,5	8,1
Production of distilled alcoholic beverages, ethanol production by fermentation of raw materials	9,4	1,9
Production of grape wines, cider and other fruit wines, production of other non-distilled drinks from fermentation	7,6	1,5
Production of beer and malts	15,3	3,1
Production of tobacco products	12,2	2,4

a – data concerning economic entities with number of employees not exceeding five

Source: GUS. Agriculture Statistical Yearbook. Warszawa 1999

### 2.3 Agriculture

Agricultural production in Poland is relatively clean owing to a considerable drop in environment contamination over the last decade, and the relatively low use of artificial fertilizers. Comparative analysis of EU data shows that the utilization of nitrogen fertilizers for one hectare of arable land is not high (39.4 kg) as compared to that in Spain (37.5 kg) and Portugal (31.5 kg). In the Netherlands the utilization of nitrogen fertilizers is tenfold higher than in Poland, and in Denmark it is threefold higher.

Favourable environmental conditions for agricultural production are confirmed by low soil contamination with harmful metals. Data from 1999 on soil levels of heavy metals shows that the percentage of samples with lead, nickel and copper levels exceeding the permitted values did not exceed 3%. For cadmium, the percentage of samples exceeding the safe level was higher: 10.5%.

### 2.4 Water

The quality of water from public and water plant installations is good, in most cases. The proportion of water supplies with poor quality was relatively low, especially in towns. The situation is not so good in local water plants. Data shows that in 1999 over 85% of local water plants in towns, and 80% in rural areas, provided good water. Well water is used mainly for household needs on farms and in small production plants. From 1990 - 1999 the proportion of wells with poor quality water decreased from 45.5% to 41.1% from public wells, in plant wells from 28.8% to 25.5% and in household wells from 51.6% to 41.3%. In rural areas during the same time period the percentage of farm wells with poor quality water fell from 61.1% to 41.5%.

In a decade the sanitary quality of water has improved considerably. Similarly, water supplies have improved; the network of water pipes has been extended and new water processing methods introduced. However, water quality in country regions is not consistently good. The quality of water supplied for the purposes of food industry should improve further.

### 3. Monitoring of selected food products

In Poland food quality control is carried out by monitoring programmes, official food control activities (mainly sanitary and veterinary inspections) and scientific research.

Since 1991 monitoring of the quality of soil, plants, agricultural products and food products has been carried out for selected chemical contaminants. The Ministry of Agriculture and Rural Development and their scientific research institutions lead this work. Monitoring presently covers:

- basic commodity products important in the national diet
- contaminants constituting the greatest potential health risks, including harmful metals, pesticides, nitrates, polychlorinated biphenyls, aromatic hydrocarbons, and certain mycotoxins.

The results of Polish food monitoring for 1999, when compared with similar data from preceding years, demonstrates that raw materials from plant and animal sources, were of good quality and overall met the criteria for chemical contamination permitted levels as laid down in Polish legislation. These changes have been brought about by a number of factors particularly the closure of heavy industries that previously polluted the environment, and the change to lead-free petrol.

Some examples demonstrate this: In the past five years the proportion of samples with cadmium and lead levels exceeding the highest permissible contamination has been decreasing. Presently the lowest proportion of samples with excessive contamination was found in rye - 0.6% contained cadmium in permitted amounts and 1.9% contained permitted amounts of lead. The highest levels of excessive cadmium and lead content were found in wheat samples, 7% and 5% respectively contained these heavy metals in amounts above the highest permissible levels.

Some problems still persist but are improving: Monitoring of nitrates in vegetables since 1995 showed that in about 18% of samples the levels of these compounds were still above permissible values. The highest numbers of samples with excessive nitrogen content were found in horseradish 43%, garden beets 36.6%, white cabbage 34%. The lowest numbers were in cucumber 0.4%, tomatoes 1% and carrots 10.7%. In recent years the proportions of samples with excessive nitrogen levels have decreased, especially for potatoes and parsley. Overall the monitoring results showed that the percentage of samples with excessive levels of contaminants dropped significantly for seven vegetables; for five the proportions remained unchanged or increased slightly.

Conversely results from the monitoring studies of pesticide residues in selected plant raw materials tell a different story. While the data indicated that the health risks associated with the use of pesticides is relatively small, the proportion of samples with pesticide residues above the permissible level was 1.39%. In the period from 1995 to 1999 the percentage of samples with pesticide residues increased from 6.1% to 8.7% and the proportion of samples with the highest permissible contamination increased from 0.2% to 1.39%. This may, in part be explained by improved sampling and monitoring techniques, but there is no simple explanation for this change - which will be monitored further.

In 1999 no samples were found with cadmium and lead concentrations above the highest permissible content in raw animal materials, (including liver and kidneys). Cadmium levels in animal muscle and liver and in cows' milk were also below the permissible values. Cadmium in concentrations above 1 mg/kg was found in 9% of pig kidneys and 27% of bovine kidneys. For that reason, smoked offal products are not recommended in the diet of pregnant women and children. Fortunately, according to the dietary survey of 2000 only a small percentage of the population consumed these foods.

Monitoring studies since 1995 have demonstrated that antibiotic residues are still present in milk as a result of inadequate withdrawal periods being enforced. These substances were present in about 5% of milk samples, although according to Polish regulations these compounds should not be present at all. Antibiotic residues in milk are a health risk for consumers, and cause considerable financial losses to farmers since this milk is excluded from the human food chain.

#### **4. Monitoring and inspection results**

Results of sanitary inspection (1990-2000) for the whole country show that over 80% of food produced in Poland, or imported, are safe. The sanitary inspection service cooperates closely with the veterinary inspection in official food control.

A detailed analysis of food products produced in Poland in 1999-2000 indicates that in seven out of nine groups of food products the percentage of unfit or disqualified food samples has decreased.

Highest improvement was noted in plant fats, milk and meat, excluding canned meat. The percentage of unfit samples of ready-to-eat products in retail outlets has risen in that period. The highest proportions of unfit samples in 2000 were butter 23%, ready-to-eat dishes 24%, fish and fish products (excluding canned fish) 16%. The lowest percentage of unfit samples was in vegetable fats 2%, fruit, vegetables, mushrooms and their products 5%, and bakery products about 8%.

Most frequently poor microbiological quality was the problem. In 2000 this caused 25.2% of butter samples to be unfit, 24% of ready dishes, and nearly 17% of milk samples. From 1998-2000 the situation was worst for bakery products, where the proportion of unfit samples increased from 10.3% to 19.5%. It is interesting to note that food labeling infringements had reduced in seven out of the ten food groups analyzed in this period.

The proportion of samples unfit due to chemical contamination was evidently lower than due to microbiological contamination. In summary, the improvement in the quality of food (as controlled by sanitary inspection) is gradually improving - but slowly, see Table 3.

**Table 3: Main infringements by food groups in 1998-2000**

Product or group	Microbiological Analysis			Chemical analysis			Labeling		
	1998	1999	2000	1998	1999	2000	1998	1999	2000
Meat, meat products (not canned)	11,2	13,4	12,5	9,9	8,3	6,4	10,1	10,5	6,9
Liquid milk for consumers	19,7	19,8	16,6	2,1	2,3	2,3	1,8	0,7	0,6
Butter	24,0	25,4	25,2	4,4	4,7	4,7	1,5	2,0	0,5
Fish and fish products (not canned)	10,5	13,0	13,8	3,3	4,0	3,7	3,1	2,7	2,6
Vegetable fats	0,9	1,0	0,8	1,7	3,4	1,8	0,5	0,9	0,6
Animal fats	15,4	-	-	4,4	6,8	5,8	8,0	5,6	5,8
Ready dishes	21,4	21,3	24,0	4,0	3,8	4,5	5,1	5,4	6,0
Fruit, vegetables, mushrooms inc. products	3,1	5,9	2,2	6,5	5,2	4,9	3,4	2,9	2,8
Bakery products	10,3	13,5	19,6	1,3	1,2	1,7	5,1	6,6	8,7
Soft drinks	10,0	7,8	7,0	6,5	4,3	7,0	7,8	6,4	7,6

Source: Own analysis based on data from Province Sanitary Epidemiological Stations.

Results from the Veterinary Inspections and the State Institute of Veterinary Medicine in Pulawy (1995) indicate that there were significant microbiological problems. The microbiological quality of milk and its products has been a persistent problem in Poland. For example the 1995 results showed that almost 22% of hard cheeses and almost 20% of unripened cheeses had considerable problems; while even the lowest number of problems - from powdered milk was over 9% and milk drinks and desserts over 10%. Similarly the microbiological quality of smoked meats showed that the highest number of unfit samples was from part-cooked sausages (about 7%) and smoked offal products (about 6%). The lowest level was in smoked poultry products (about 1%) and cooked sausages (over 2%).

#### **4.1 Contamination assessment of daily food intakes**

The level of risk that consumers' experience from chemical contamination can be obtained by analyzing the quality of food consumed on a daily basis. In Poland, monitoring of the health quality of food intakes has not been conducted routinely but many scientific research centres focus on this problem. Results of studies of contaminants (lead, cadmium, mercury and nitrates) point out that in the overwhelming majority of cases daily intakes are satisfactory. For example: the mean tolerable weekly cadmium intake was not exceeded in any daily dietary intake and fell within the range of 27-88% of the Provisional Tolerable Weekly Intake (PTWI) even though some foods came from regions regarded as particularly contaminated. A similar situation was noted for lead: the maximum tolerable weekly intake was not exceeding 70% of PTWI. Mercury contamination analyzed per person/day showed that in the diets studied mercury was present in relatively low concentrations, not exceeding 25% of PTWI.

A similar situation has been found for nitrate contamination of food intakes. In recent years the content of these compounds in raw materials has been decreasing, leading to a reduction in daily food intakes. The content of nitrates and nitrites in traditional diets is not a health risk. However, those consuming high amounts of vegetables could be at risk of excessive nitrate and nitrite levels.

The data all points to a progressive improvement of the safety and quality of food in recent years in Poland. Concentration on harmonizing of regulations with those of the EU, and structural changes and improvements throughout the food chain have all contributed to this progress.

One of more important indicators of the food safety is the incidence of food poisonings and food-borne infections nationally. Data published by the State Institute of Hygiene shows that in 1998 the total number of food poisonings and foodborne infections was 30,515 cases; due mostly to *Salmonella* infections. These problems did not originate from mass catering institutions but mainly from household contamination.

**Table 4: Foodborne intoxications and foodborne poisonings in Poland 1994-1998**

Aetiological factor	Years									
	1994		1995		1996		1997		1998	
	No of cases	%	No of cases	%	No of cases	%	No of cases	%	No of cases	%
Salmonella	36,277	93,4	30,029	88,6	26,052	90,2	23,157	82,9	26,675	87,4
Staphylococci	268	0,70	760	2,2	213	0,7	450	1,6	375	1,2
Cl. botulinum	116	0,30	118	0,4	107	0,4	81	0,3	93	0,3
Other bacteria	2166	5,6	2990	8,8	2497	8,7	4 234	15,2	3372	11,0
Total	38,827	100,0	33,897	100,0	28,869	100,0	27,922	100,0	30,515	100,0

Source: Przybylska A.: Przegląd Epidemiologiczny nr 1-2, 1999, 1-2, 1998, 1-2, 2000

#### **4.2 Food hygiene in food production and processing**

In the last decade the sanitary condition of food production and processing plants has improved owing to modernization of a considerable number of plants. Improved accommodation, equipment, new production lines, the widespread introduction of quality assurance systems and increased awareness of the responsibility of producers for food safety and quality have all contributed.

In 2000 the percentage of food and nutrition institutions assessed as in a poor hygienic state (as supervised by the Sanitary Inspection) was on average 16.44% in the total (350,904). Of these 3.24% were classified as inadequate both in technical aspect and hygiene, 7.41% as inadequate in technical aspects, and 5.80% as inadequate in food hygiene.

#### **5. New approaches to risk analysis**

The introduction of the risk analysis approach throughout the food chain is playing a central role in food safety policy and strategy in Poland.

Risk analysis related to food safety is studied by many scientific research centres and ministerial advisory bodies<sup>3</sup>. Where there are particular problems of health risks related to food, special attention is given to organizing scientific conferences and training courses for the presentation of

<sup>3</sup> The main scientific centres in Poland working on the problems of risk analysis are: The National Food and Nutrition Institute; The State Institute of Veterinary Hygiene; The State Institute of Hygiene other scientific research institutes, the pertinent chairs at Agriculture Universities, and certain institutes of the Polish Academy of Sciences. The Sanitary-Epidemiological Council of the Ministry of health the opinion-forming and advisory organ of the General Sanitary Inspectorate, also periodically prepares evaluations and opinion on food safety.

research results, evaluation of the problems and development of proposals for practical solutions to improve health protection.

Long-term governmental projects are sponsored where several centres and many experts are working on food safety and risk reduction projects. Projects on risk evaluation and scientific research are conducted independently and receive financial support from the State budget. Studies on risk analysis are conducted using methods accepted in EU countries.

The analysis of risk in the food industry is carried out through HACCP systems. In Poland HACCP is obligatory in plants producing dietetic food products. Even so for several years in many other areas, it has been implemented voluntarily. HACCP has been adopted particularly by the meat, dairy and fruit-vegetable production industries. In most cases, where foreign capital has been invested in food plants, HACCP has been introduced.

## **6. Education and communication about food safety.**

The new approach taking into account the whole food chain approach to food safety requires that education and training take into account the whole food chain - from agricultural raw materials through to food processing.

Postgraduate education in food safety for skilled workers in agriculture, industry and official food control agencies is provided by scientific-research Institutes<sup>4</sup>.

In the area of food processing at postgraduate level, food safety education is also provided by other pertinent agencies from the food industry, governmental institutions, and non-governmental organizations, such as the Central Technical Organization, particularly the Association of Engineers and Technicians of Food Industry, and other producer associations.

Governmental institutions participate in postgraduate education through the input of official food control practitioners, such as sanitary inspectors, veterinary inspectors and inspectors of agricultural products. Some training activities include input from organizations in EU countries participating in the 'PHARE' programme, in cooperation with Polish institutions.

When communicating about food safety risks, information is provided by the sanitary inspection groups (under the General Sanitary Inspector) and other official food control services, as well as consumer organizations, the Office of Protection of Competition and Consumers, and press spokespersons of various ministries. In the National Food and Nutrition Institute, communicating with the public about food, nutrition and health through mass media is a major activity.

## **7. Agricultural education and support**

Expert assistance for farmers is provided through a system of agricultural counselling. The restructuring and modernization of agriculture (during the process of adaptation to the common agricultural policy of the EU) would not be possible without this support.

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<sup>4</sup> These research institutes include: National Food and Nutrition Institute; State Institute of Veterinary Medicine; State Institute of Hygiene; Institute of Cultivation, Soil and Fertilization in Puławy; Institute of Biotechnology; Institute of Meat Industry.

Since 1991 agricultural counselling services have been in a process of reform. Presently counselling helps farmers in many ways, such as:

- analysing the current situation and assessing prospects for the future
- raising knowledge and facilitating understanding of emerging problems, including those of food safety
- obtaining the detailed information necessary for problem solving
- facilitating adaptation, restructuring and modernization for increased productivity
- facilitates creation and development of an enterprising attitudes and abilities
- introducing accounting systems
- active development in rural areas.

The present Polish counselling system has similar dimensions as those within the EU:

- socioeconomic counselling for rural population
- aid in obtaining of qualifications for new occupations for agricultural workers,
- occupational re-education for those who intend working in the modernized agricultural systems
- aid for in learning about the legal, financial, fiscal, agricultural and other regulations.

The Agricultural Counselling Centres in Poland are run presently by about 1000 specialists. These have a university education and particular skills and information, such as computer networking and market information at their disposal.

Apart from services in the provinces about 310 regional agricultural counselling groups have been established throughout Poland.

## **8. Offical controls**

Reform of the structure and organization of offical controls in Poland is underway, as is legislative reform. There has been a new food Act to align Polish regulations with those of the EU.

Additional reforms of monitoring and surveillance systems for offical food controls are being introduced to rationalised and streamline the current system. At the moment there are seven systems of official food control. This dispersed system is in the process of being restructured to optimise these services.

A new food strategy and policy is under consideration. Poland intends to create a similar unified Food Authority as Food Standards Agency in UK. This unified system of food control will be governed by the Ministry of Health.

Concluding, as a result of political, economic and legal changes in Poland, the food safety and control system is in dynamic state, with continous development and progress.



## CONFERENCE PAPER

### EXAMPLES OF COMPREHENSIVE AND INTEGRATED APPROACH TO RISK ANALYSIS IN THE FOOD CHAIN - EXPERIENCES AND LESSONS LEARNED.

#### **An integrated approach to food safety covering the whole of the food chain and beyond: Sweden, Finland and the European Commission**

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#### **Overview**

*This paper explains the need and application of a holistic approach to risk analysis and food safety throughout the food chain, at national, regional and international level. Responsibilities of those who produce, process and trade food are explained, with details of those responsibilities. Tackling problems at source using a preventive and integrated approach is emphasised and successful examples (such as the control of salmonella in poultry in Sweden and Finland) are explained. The paper concludes by recognising the need to develop systems for detecting emerging risks, as they arise, at any point in the food chain.*

#### **1. Introduction**

It is difficult to make a firm assessment of the current situation about foodborne disease and the trends because of widespread under-reporting of these cases. However, many countries with systems for recording foodborne disease have reported significant increases in the incidence of diseases caused by pathogenic micro-organisms in food over the past few decades. As many as one person in three in industrialised countries may be affected by foodborne illness each year, resulting in deaths and human suffering and economic losses running into billions of US\$<sup>5</sup>. In Europe, bovine spongiform encephalopathy (BSE - 'mad cow disease') and episodes of dioxin contamination of foods have resulted in a loss of consumer confidence in the safety of some foods on the market, with severe economic consequences. It is vital that consumer confidence in the food supply be

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<sup>5</sup> A Global WHO Food Safety Strategy, WHO Geneva, 2001 and

Opinion of the Scientific Committee on veterinary measures relating to public health on Food-borne zoonoses. 12 April 2000, European Commission.

restored and maintained. Consumers should be able to assume that all food offered for sale is safe. Nowadays in Europe there is also greater consumer interest in animal welfare aspects of food production – not only ethical concerns, but also the possible impact on the quality and safety of foods of animal origin.

At the *Food Chain* conference<sup>6</sup>, organised in Uppsala during the Swedish Presidency of the European Union (EU), the vision for future food production was summarised as '*Safe, sustainable and ethical*'. Although much progress has been made in recent decades and some claim that 'our food has never been safer', those involved in trying to ensure the safety of the food supply should recognise that there is still a long way to go before that goal is reached.

## **2. Holistic approach to food safety – the whole of the food chain and beyond**

Previously, food control often concentrated on the examination of end products and inspection of food processing and catering establishments. However, in recent decades there has been a growing awareness of the importance of an integrated, multidisciplinary approach, considering the whole of the food chain (and in some cases beyond what is conventionally regarded as the food chain). Many food safety problems have their origins in primary production and one result of the change in approach is a much greater awareness of the need for better control on the safety of animal feed, an area which until fairly recently had received scant attention from those responsible for food safety. In recent years, much stricter control on animal feed has been introduced in the EU and the Codex Alimentarius Commission (CAC) has established an *ad hoc* Task Force on Animal Feeding.

Environmental pollution, for example with persistent chemicals such as mercury, cadmium, PCBs and dioxins, can lead to food safety problems. Another result of the change to a more holistic approach is recognition of the need for much closer contact and collaboration between the food control authorities and those responsible for environmental protection. Coupled to this there is now a greater emphasis on source-directed preventive measures, for example, measures to prevent mycotoxin formation, both pre- and post-harvest. Some examples of this preventive approach are given below.

### **2.1 Application of risk analysis in the food safety area**

Towards the end of the last century, there was a paradigm shift in the food safety area with the introduction of a risk-based approach. One reason for this was the advent of the World Trade Organisation Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement). This Agreement requires Member States (MS) to base their food safety measures on risk assessments, taking into account risk assessment techniques developed by the relevant international organisations – the CAC in the case of food safety. However, Article 5.7 of the SPS Agreement allows MS to take provisional measures, where relevant scientific evidence is insufficient.

In order to stimulate the application of risk analysis principles in food safety work, FAO and WHO jointly organised a series of expert consultations on the different components of risk analysis – risk

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<sup>6</sup> Web site: [www.foodchain.org](http://www.foodchain.org)

assessment, risk management and risk communication<sup>7</sup>. The recommendations from those Consultations have been used as the starting point for the introduction of risk analysis principles into the Codex system. They have also been used by many government agencies in developing food safety risk management.

There should be a functional separation of risk assessment and risk management in order to ensure the scientific integrity of the risk assessment. However, risk analysis is an iterative process and interaction between risk managers and risk assessors is essential for the practical application of risk analysis. This has been recognised in the proposal for the new European Food Authority (EFA)<sup>8</sup>, which will have responsibility for risk assessment in all matters having a direct or indirect impact on food safety. The Authority will work closely with the European Community bodies that have responsibility for risk management (the Commission, the Council and the Parliament). In line with the holistic approach to food safety, the mandate of the Authority will cover the whole 'farm-to-fork' continuum.

A risk-based approach to food safety risk management implies that food control resources should be directed towards problems that pose the largest threats to health and where the potential risk reduction is large - in relation to the resources used. In order to make priorities more risk-based, much better systems for follow up and reporting on food-related diseases are needed and better international co-operation in this area. WHO is making a major effort to improve the current situation, but is, of course, dependent on the active co-operation of national agencies.

## 2.2 Producers, processors and traders

### *Responsibility for food safety, HACCP-based in-house control*

It is fundamental that all involved recognise that *primary responsibility for food safety lies with those who produce, process and trade in food*. This responsibility covers the whole food chain – farmers and their suppliers, fishermen, slaughterhouse operators, food processors, transport operators, wholesale and retail traders, caterers, etc. It is their duty to ensure that the food they produce and handle is safe and satisfies the relevant requirements of food law. And they should verify that such requirements are met. They should operate according to the principles of Good Agricultural/Hygienic/Manufacturing Practice. Food production, processing and other handling operations should be analysed with a view to identifying hazards and assessing associated risks. This should lead to the identification of critical control points and the establishment of a system to monitor production at these points (i.e. the Hazard Analysis and Critical Control Point – HACCP approach). The introduction of HACCP-based in-house control may be difficult in small and medium-sized enterprises with limited knowledge, experience and resources and is probably best achieved by collaboration between the food industry and trade, education and training organisations and the supervisory authorities. The CAC and its parent organisations, WHO and FAO, have

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<sup>7</sup> FAO/WHO Expert Consultations (1) FAO/WHO Application of risk analysis to food standards issues. Report of the Joint FAO/WHO Expert Consultation 1995, Geneva. (2) FAO/WHO Application of risk management to food safety matters, Report of the Joint FAO/WHO Expert Consultation 1997, Rome. (3) FAO/WHO Application of risk communication to food standards and safety matters. Report of the Joint FAO/WHO Expert Consultation. 1998, Rome.

<sup>8</sup> COM (2000) 716 final: Proposal for a Regulation of the European Parliament and of the Council laying down the general principles and requirements of food law, establishing the European Food Authority, and laying down procedures in matters of food. COM (2001) 475 final: Amended proposal for a regulation of the European Parliament and of the Council laying down the general principles and requirements of food law, establishing the European Food Authority, and laying down procedures in matters of food safety.

produced useful guidelines and training and information materials<sup>9</sup> on the application of HACCP in food control.

### **FOOD HYGIENE IN CATERING ESTABLISHMENTS**

In many countries there are indications that a large proportion of cases of foodborne disease are due to poor hygienic practices in restaurants and other commercial catering establishments. Those responsible for the operation of such establishments must ensure that their personnel receive adequate training in food hygiene and that they work in such a way as to be able to guarantee the safety of the food they serve. Manuals and/or handbooks based on HACCP-principles should be developed to assist in such training.

#### *Traceability*

The traceability of feed, food-producing animals and food should be established at all stages of production, processing and distribution. In the EU this requirement already exists for some foods and it will apply generally when the new European Community Regulation laying down the general requirements of food law<sup>6</sup> is finalised and comes into force. Traceability is important for at least two reasons. Firstly, to enable unsafe foods to be traced through the food chains so that the source of the problem can be identified and dealt with. Secondly, to ensure fair practices in the food trade, for example, the labelling of organic foods, foods consisting of or prepared from genetically modified organisms, and foods fulfilling certain religious (such as Halal or Kosher) criteria. A good system for tracing food throughout the production, processing and distribution chain is also valuable for the food industry and trade, since recall of faulty products can be more effective.

### **2.3 Supervisory authorities**

The main task of the *supervisory authorities* is to lay down food safety standards and to ensure that the HACCP-based internal control systems operated by food producers, processors and traders are appropriate, validated and operated in such a way that these standards are met. In addition, the authorities should carry out certain direct control activities to ensure compliance with legislation and they should also provide information and advice on a wide range of food-related matters that can affect human health.

#### *Organisation*

In recent years, the organisation of food control at the national level in many European countries has been changed and a single agency has been given responsibility for the whole of the food chain from 'farm to fork'. Such a system has many advantages and is to be recommended. If responsibility is, nevertheless, divided between two or more agencies at the national level it is vital that there is very close co-ordination between them. Similarly, if responsibility for food control is divided between central and local authorities, then it is important that the central authorities not only advise

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<sup>9</sup> For example, Strategies for implementing HACCP in small and/or less developed businesses (WHO/SDE/PHE/FOS/99.7), Guidance on regulatory assessment of HACCP (WHO/FSF/FOS/98.5)

<sup>6</sup> European Community Regulation laying down the general requirements of food law COM (2000) 716 final: Proposal for a Regulation of the European Parliament and of the Council laying down the general principles and requirements of food law, establishing the European Food Authority, and laying down procedures in matters of food. COM (2001) 475 final: Amended proposal for a regulation of the European Parliament and of the Council laying down the general principles and requirements of food law, establishing the European Food Authority, and laying down procedures in matters of food safety.

and inform the local authorities on food control matters, but also have the power to co-ordinate and audit their work.

#### *Transparency*

The work of the supervisory authorities should be carried out in a transparent manner, with open communication with consumers, producers, processors, traders and other interested parties. One effective way of increasing compliance with food legislation is to make the results of food control activities public. This applies of course to inspection reports and results of control analyses carried out by the supervisory authorities. In some countries the results of inspections of catering establishments and shops are posted in the premises or published in the media and this no doubt affects consumers' choice of shops and restaurants to visit and, encourages compliance. In countries where responsibility for food control is divided between different authorities, e.g. central and local authorities, the results of audits carried out by national authorities on the food control work carried out by local authorities should be made public, as they are in the UK, for example. The results of the European Commission's Food and Veterinary Office inspections/audits of the food control activities carried out in the Member States are made public and are available on the Internet<sup>10</sup>.

### **2.4 Consumers' responsibilities**

***Responsibility for food hygiene in the home and for ensuring that food storage and preparation recommendations are followed rest with consumers. This should not be underestimated - it is the important last link in the food chain for food safety. The national supervisory authorities, with others, have a duty to try to improve consumers' knowledge about food hygiene in the home, and to provide recommendations, information and education to help consumers manage food risks more effectively.***

Poor dietary habits and food choices are a major factor in the causation of food-related disease, especially in industrialised countries. Nevertheless, when consumption of certain safe foods is much higher than needs, consumers can be said to be "digging their graves with their teeth". National authorities should provide the public with information to help them to make their dietary habits consistent with good health.

### **3. Tackling problems at source – 'Prevention is better than cure'**

Different approaches may be used to try to ensure that the levels of contaminants in foods are as low as reasonably achievable and never above the maximum levels considered to be acceptable or tolerable from the health point of view. Essentially, these approaches consist of

- measures to eliminate or control the source of contamination
- processing to reduce contaminant levels and to avoid recontamination
- measures to identify and separate contaminated food from food fit for human consumption - contaminated food should then be rejected for food use.

Previously, most systems for regulating food safety were based on legal definitions of unsafe food, enforcement programmes - to remove such food from the market, and the application of sanctions

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<sup>10</sup> <http://europa.eu.int/comm/food/fs/inspections/vi/reports/index-en.html>

on those held responsible for contravening the regulations. Such systems have not been successful in dealing with previous or current problems and are unlikely to be able to deal with emerging risks.

In some cases, a combination of the above approaches is used, for example, when emissions from previously uncontrolled sources have resulted in environmental pollution with persistent chemicals that have then entered the food chain. Control of final products can never be extensive enough to guarantee contaminant levels below established maximum levels and safety, and other aspects of food quality cannot be 'inspected into' food at the end of the production chain. In most cases, chemical contaminants cannot be removed from foodstuffs and there is no feasible way in which a batch of contaminated foodstuffs can be made fit for human consumption.

The advantage of eliminating or controlling food contamination at source, i.e. *a preventive approach*, is that this is usually more effective in reducing or eliminating the risk of untoward health effects. Smaller resources for food control are required with this approach and the rejection of foodstuffs and resulting economic and other losses is avoided. It also decreases the spread of the contaminant in the production chain. The BSE case illustrates what happens if these approaches are not effective and contamination spreads: the effects can be devastating and long-lasting for human health, control and enforcement measures, food policy, legislation, trade and economics.

The use of a preventive and integrated approach to the management of food safety through out the food chain is illustrated in the following examples.

### 3.1 *Control of Salmonella in poultry*

**An example of an integrated strategy to control *Salmonella* in poultry, covering the different parts of the feed-food chain, is described in reports from Sweden<sup>11</sup> and Finland<sup>12</sup>. The overall goal is to ensure that less than 1% of animals sent for slaughter are contaminated with *Salmonella*, thereby ensuring that poultry-meat will be free from *Salmonella*. Consistent application of this strategy has resulted in a prevalence of *Salmonella* in poultry (at slaughter) of less than 1%. The strategies to reach this goal are as follows:**

- Prevent *Salmonella* contamination in all parts of the production chain.
- Monitor the whole production chain: surveillance programmes for feed, live animals, carcasses, meat and other foods of animal origin are in place.
- If *Salmonella* is found, action is taken to eliminate the infection/contamination. Any food item contaminated with *Salmonella* is deemed to be unfit for human consumption.

All isolations of *Salmonella* in humans, animals and food of animal origin are notifiable. In addition, findings of *Salmonella* in official samples of food of any origin are notifiable. Primary isolates of *Salmonella* are characterised by sero- and phage-typing the strains and isolates of animal origin are also tested for antibiotic resistance. In order to illustrate how the system works, some details of the measures taken in the poultry area are given below.

<sup>11</sup> Zoonoses in Sweden, up to and including 1999. Ed. H. Wahlström. National Veterinary Institute, Uppsala, Sweden, 2001.

<sup>12</sup> Zoonoses in Finland. 1995-1997 and 1995-1999.

Both available at Internet address [http://www.mmm.fi.elintarvikkeet\\_elaimet/art/haku/jlkhaku\\_en.idc](http://www.mmm.fi.elintarvikkeet_elaimet/art/haku/jlkhaku_en.idc)

Since the frequency of *Salmonella* isolation in Swedish and Finnish poultry flocks is very low, most of the measures in the current control programmes are of a preventive nature. Four factors are of major importance to maintain this favourable situation.

- The breeding pyramid is kept free from *Salmonella* by regular sampling of flocks and hatcheries, as well as by slaughtering a breeder flock where *Salmonella* is detected. No *Salmonella* vaccination is applied. All grandparent animals are imported from Europe and are quarantined and repeatedly tested negative for *Salmonella* before they can be used for production.
- Feed is maintained free from *Salmonella*. The control consists of three parts: import control of feed raw materials, mandatory heat-treatment of compound feedingstuffs for poultry and an HACCP-based *Salmonella* control in the feed industry.
- Strict hygiene and biosecurity standards are in place, preventing the introduction of *Salmonella*.
- Measures are always taken in case of *Salmonella* infection in poultry. If a breeder flock is detected to be *Salmonella* positive at any time of its life, it will be slaughtered. All meat obtained from these flocks, as well as from production flocks is heat-treated. The poultry house is cleaned, disinfected and tested for *Salmonella*. Negative *Salmonella* results must be obtained before the next flock can be re-introduced.

An extensive sampling programme continuously monitors the *Salmonella* situation in poultry. In addition to sampling at the flock level, samples are also collected at all poultry slaughterhouses to monitor the end product.

### 3.2 Pesticides

In the European Union (EU) pesticides must be subjected to thorough testing and assessment prior to approval for use. Systems are in place in the European Community (EC) and in Codex for the evaluation of pesticides and for setting Maximum Residue Limits (MRLs) in foods and feeds. In order to minimise the risk of high residue levels in food and also to avoid environmental pollution and occupational health risks, pesticides should be used according to the principles of Good Agricultural Practice and, only by persons who have received adequate training. Pesticide residue levels should be monitored in food (including drinking water and sources thereof) and animal feed to ensure that they do not exceed established MRLs. The results of such monitoring should be made public, as they are in Sweden, Finland and many other countries. The fact that information about products containing levels above the MRLs is public helps encourage producers and traders to ensure that their products are in compliance. When residue levels above the MRLs are found in foodstuffs, this triggers increased control of products from the same producer/supplier and remedial action to prevent any repetition.

### 3.3 Veterinary drugs

In the EU, veterinary drugs, including antimicrobial drugs, are subjected to thorough investigation and assessment prior to approval for use. In many countries the use of antimicrobial drugs is not limited to therapeutic uses. However, in order to limit the development of antibiotic-resistance, the EC has prohibited the use of four main drugs in feed for growth-promotion purposes. Some countries, such as Finland and Sweden, are even more restrictive and antimicrobials are not used in feed for growth-promotion purposes. In addition, in Sweden and Finland the availability of drugs is limited to veterinary professionals. The levels of residues of veterinary drugs in foods of animal

origin are monitored annually and the results made public. When residue levels exceeding the MRLs are found, this leads to a thorough investigation of the source of the problem, which is usually traced to the primary producer. Such strict control measures are essential to manage the risk of development of antimicrobial resistance in food-producing animals and humans with the consequent health implications.

### 3.4 *Mycotoxins and marine biotoxins*

The problem of contamination of feed and foodstuffs with mycotoxins, such as aflatoxins, ochratoxin A, patulin and fusarium toxins, is best tackled by a systematic examination of the whole production, processing and distribution chain in order to discover the points at which contamination is likely to occur. In this way appropriate preventive and control measures can be taken. Mycotoxin levels in primary products can vary widely from year to year, depending on, among other things, climatic conditions during harvesting. Thus there is a need for constant vigilance and co-operation between agricultural advisory and control services, the food control authorities and food and feed producers. The Codex Committee on Food Additives and Contaminants (CCFAC) has developed and is developing codes of practice to reduce contamination of food and animal feed with mycotoxins<sup>13</sup>. Such codes of practice can form the basis of advice at the national level on preventive measures. Through the control of aflatoxins in animal feed components and routine monitoring of aflatoxin M1 in milk back to the individual farmer it is possible to ensure that aflatoxin levels in milk are kept below the current strict EC maximum limits. Although a considerable amount of work has been done, there is a need for much more research on mycotoxins in order to provide a sound scientific basis for recommendations for both pre- and post-harvest measures: such research is being supported by the EC.

It is very difficult to tackle the problem of contamination of shellfish with certain marine biotoxins, such as DSP and PSP, at source. Control efforts are therefore mainly directed towards trying to predict and detect relevant algal blooming, and to pre-harvest examination of shellfish for toxins in order to prevent contaminated products reaching the consumer.

### 3.5 *Persistent environmental pollutants*

Earlier emissions of persistent chemicals, such as PCBs, dioxins and mercury have led to contamination of foodstuffs, especially foods of animal origin (particularly fish). There is an ongoing need for monitoring and control of some products to ensure that they do not contain levels above safe limits. In order to protect public health it may also be advisable to issue recommendations to susceptible population groups, for example, women of childbearing age, advising them to restrict their consumption of certain fish species, or fish from contaminated waters.

The most effective way to reduce the levels of environmental contaminants in food (and thus human exposure) is to take measures to reduce emissions from industry and other sources. (The levels of methylmercury in fish from some oceans is unfortunately due to volcanic activity and therefore not amenable to control.) In recent decades the introduction of such measures has resulted in a number of success stories. For example, the levels of lead in human blood have dropped quite dramatically

<sup>13</sup> Codex Committee Food Additives and Contaminants, Codes of practice to reduce contamination of food and animal feed with mycotoxins, Codex Alimentarius, Rome 2001



in countries where lead is no longer added to petrol. Likewise, measures to control pollution with dioxins and PCBs, and a ban on the use of persistent pesticides, such as DDT, has led to a marked reduction in the levels of these substances in food and in human exposure, as measured by the levels in human milk. This is an example of an area where co-operation between the authorities responsible for food safety and environmental protection has borne fruit. Although the levels of PCBs have decreased, it is important that control on the disposal of PCB-containing materials is continued, otherwise there is a risk that environmental pollution and levels in food will start to increase again.

#### **4. Emerging risks – 'Looking for trouble'**

Agencies responsible for food safety should have a 'reconnaissance' or 'intelligence' function with the task of detecting emerging risks, which may arise at any point in the food chain. These risks could be due to emerging pathogens, for example pathogens resistant to a wide range of antibiotics, to the use of new feed components, new industrial or domestic chemicals, new production, processing and handling methods or to changes in dietary habits. The detection of emerging risks is one of the specific tasks assigned to the proposed European Food Authority.

#### **5. Recommendations and topics for discussion**

- 5.1 Food safety strategies should be risk-based, giving priority to measures that have the potential to result in the greatest reductions in food-related diseases.
- 5.2 An integrated, multidisciplinary approach to food safety should be adopted throughout the food chain (food production, processing, and distribution, including animal feed and other aspects of primary production).
- 5.3 A preventive approach to food safety should be adopted in order to decrease the risk of food contamination, tackling problems at source wherever possible.
- 5.4 The results of all official monitoring tests (pesticide residues, veterinary drugs residues and other contaminants in food, feed and drinking water), official food inspections and other official food control activities should be made public.
- 5.5 Education and training about food hygiene, throughout the food chain (including catering personnel and consumers) should be improved.

## CONFERENCE PAPER

### INSTITUTIONAL AND SCIENTIFIC CO-OPERATION, NETWORKING AND CAPACITY BUILDING IN THE FIELD OF FOOD SAFETY AND QUALITY

#### Hungary and The Netherlands

This paper has been written in close collaboration by:

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#### **Overview**

*This paper explains the situation in Hungary and The Netherlands regarding scientific co-operation, networking and capacity building in the field of food quality and safety. Specific details are given about institutional co-operation including exchanges between staff and students, collaborative projects in policy and science advancement, institutional and scientific networking projects and capacity building. Within a dynamic and fragile marketplace, with ever changing consumer expectations, the implications and application of a Pan-European approach to further scientific co-operation in food safety and quality are raised by this example.*

#### **1. Introduction**

Scientific collaboration in the field of food safety and quality within Europe has been well established between Hungary and The Netherlands over the past twenty years. There are several dimensions to this co-operation, which are increasingly important for scientific research and technological developments and their application to food policy, within the European region and beyond. As enlargement of the European Union progresses and trade between all countries in the region expands to meet the needs of more discerning and critical consumers, food producers (and the scientific and policy makers that they depend upon) are presented with challenges that are increasingly difficult to meet in isolation. Food safety and quality issues are complex and extend beyond national boundaries. Strategies to increase scientific co-operation, networking and capacity building that contribute to harmonised food safety policies, innovation and technological

developments provide the foundation for efficient delivery of safe quality food and the effective operation of competitive markets within the European region.

## **2. Institutional and scientific co-operation**

Co-operation in the field of food safety, food quality and agricultural matters has been established and institutionalised between Hungarian and Dutch institutions, in particular with the Wageningen University and Research Centre (WUR). From the eighties onwards four Memoranda of Understanding (MoU) on co-operation have been agreed between Hungarian institutions and Wageningen. One particular example has been the exchange of students, and scientific and lecturing staff, between institutions in both countries.

There has also been extensive collaboration, for example, in the field of integrated and biological pest management, initially between Wageningen and a research institute and the Ministry of Agriculture, followed by agricultural and horticultural universities. A project to place plant protection education on a more progressive footing firstly involved the BSc, later the MSc and finally PhD level. Presently there is ongoing research co-operation between Wageningen and various Hungarian Universities and research institutes in biological and integrated pest control with exchanges of staff and students, as well as a joint research effort.

Another form of co-operation is the project on the tracking and tracing of food-producing animals. The Netherlands is taking a leading role in livestock production technology. WUR has a prominent role in this field<sup>14</sup> particularly in the co-operation and development of an identification and registration system for beef and dairy cattle, and pigs. A Wageningen institute is the main contractor while other Dutch government services and a private enterprise also participate. Overall responsibility lies with a Hungarian national institute. This project aims to strengthen the Hungarian beef cattle and pig chain through operation of an identification and registration (I&R) system according to EU regulations, facilitating co-operation between Dutch and Hungarian governments, NGOs and enterprises. The funding ministry is the Dutch Ministry for Economic Affairs, which deals with this type of pre-accession activity.

Co-operation in food safety and quality also exists between Dutch and Hungarian institutions (Agricultural University, Dept. of Industrial Microbiology, ATO-DLO Agricultural Research Dept., RIKILT, Wageningen and Central Food Research Institute, Budapest etc.). Joint research work covers projects in fermentation technologies, investigation of enzymes, development and application of new analytical and microbiological methods as well as preparatory work on food chain management.

In addition, Hungarian researchers and other professionals have attended a variety of specific courses in Wageningen, and visiting experts have worked in various research institutes. Details of participation in courses and involvement in research programmes are given in Appendix 1. Funds for these activities came from the EU's 'Tempus Phare' programme, in which several EU Member States scientific organisations co-operate with those of Central and Eastern European countries.

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<sup>14</sup> WUR is heavily involved in the tracking and tracing activities, it provides the Chairperson of the International Working Group on Tracking and Tracing, it is a member of the Groupe d'Identification Electronique des animaux (IdEA), and is involved in ICAR, an institution which serves as a test-house for zoonoses.

Within the EU's 'Socrates' and 'Erasmus' programmes funds became available for student exchanges in various disciplines; for instance, in a fish culture project involving 15 students and co-operation on the curricula of the MSc course. Presently exchange programmes exist with seven universities. Plans for 2001/2 and 2002/3 foresee extended exchange periods for students from Hungary to Wageningen and from Wageningen to Hungary, concerning animal nutrition, horticultural and agricultural sciences, farm management, meteorology and water related fields.<sup>15</sup> An interesting further development is the East-West-South co-operation that takes place in a project with Vietnam on fish culture, which is sponsored by the Dutch Ministry for Development Co-operation.

From these experiences of institutional co-operation the following can be concluded:

- (i) to establish good co-operation between institutions, the signing of a Memorandum of Understanding is not enough. In the MoU reference to funds available (or that can be raised) needs to be included to enable activities to be undertaken. MoUs without financial contingencies are not viable.
- (ii) People undertaking exchanged programmes need to have a good command of a mutually understood language.

Similar types of co-operation have occurred between Wageningen and other Central and Eastern European countries. Some co-operation has been less intensive, but it has the potential for further development.

It appears that an increasing variety of national, regional or international programmes are becoming available to finance various forms of co-operation: particularly attractive are forms of co-operation that involve institutions from several countries. Various EU programmes have encouraged further co-operation between institutions in an extended number of countries.

Institutional co-operation based on clearly defined MoU offers a positive model for developing and extending scientific knowledge and collaboration. Extension of this type of co-operation to involve institutions and countries on a Pan-European basis offers great potential in the fields of food safety and quality.

### **3 Pan-European co-operation in policy and science advancement**

#### **3.1 The current situation**

Effective food safety policy must recognise the inter-linked nature of an increasingly complex food production chain. This requires assessment and monitoring of the risks to consumers' health associated with raw materials, farming practices and food processing activities; effective regulatory action to manage risks; and the establishment and operation of control systems to monitor and enforce the operation of these regulations. Each element forms a part of a cycle. Each part of the cycle must work to the highest possible food safety and quality standards, using a risk analysis approach, which must be enforced either by consumer demands in the market place or by official control measures.

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<sup>15</sup> The work of SCOOP (Scientific Cooperation) should be noted. In this context European Union Member States work together in the field of food safety and quality.

These facts demand a comprehensive and integrated approach to food quality and safety. For example, EU legislation has to be enforced in an efficient way in the Member States, in line with the principle of Subsidiarity. Responsibility for enforcement above all should remain primarily a national, regional and local responsibility. However, the Internal Market means that these are not exclusively national responsibilities: each Member State has a duty for the food produced on its territory not only for its own citizens but all citizens of the EU and third countries.

### **3.2 New challenges and partnerships in an extended Europe**

Recently, much attention has been paid to food chain management by researchers and business managers alike. In agribusiness for reasons of food-safety, environment, efficiency and technological innovations, partnerships in the supply chain are a widely accepted way of doing business. Based on the experiences of chain management, partnerships are aiming at optimising quality and safety. Networks, moreover, focus on getting access to new distribution channels or making products serving consumer needs. Furthermore, access to each other's knowledge can be a driving force for partnering. Flexibility of partnerships is a prerequisite in these cases.

Participating in network partnerships requires new knowledge, skills and attitudes. It is a challenge for all practitioners to work together to create knowledge, collaboratively, and to transform this knowledge into competitive competencies.

The European Union is preparing for enlargement of the European market with countries in Central and Eastern Europe. A functioning market economy has to exist as well as the capacity to cope with the pressure of competitive market forces within the Union. Many of the transitional economies in Central and Eastern Europe are extending their trading relationships with EU members further. In agribusiness, structural reforms will be necessary for these countries to come into line with developments in existing EU member states.

In an enlarged European market of more than 450 million consumers, the necessity for organisations to focus on their core business and to look for reliable partners will become even more important. Although much experience is already at hand, establishing chain networks comprising partners from Western, Central and Eastern Europe will require much effort. Exchanging knowledge and sharing experiences between representatives of public and private organisations can contribute to making such networks a success.

These tasks can't be implemented in isolation; institutional and scientific co-operation between countries is essential. The Dutch-Hungarian scientific co-operation is contributing to this international effort. From these experiences further projects can be initiated, involving more institutions from an extended Europe. Projects could be submitted to the EC for funding under its Sixth Framework Research Programme. Such co-operation and co-ordination ensure that the resources and management of research are more efficient at regional level, avoiding duplication of effort and enabling gaps to be filled.

The results of these partnership activities have proved that it is useful to deepen and extend this type of co-operation in food safety and quality improvement, since food safety and quality are inherently international. Scientific co-operation networks could be extended throughout the European region to address issues that could benefit from joint action. Policy issues must be resolved to lay the foundation of harmonised rules and regulations at the regional level.

Existing co-operation concerning exchange of information and personnel between institutions can be extended by:

- generation, collection, processing and dissemination of authoritative information and data on public health, including disease surveillance
- sharing of experience on the evaluation of health
- encouraging more participation of countries in the work of Codex Alimentarius
- helping to establish the food safety policy in the co-operating countries
- enhancing awareness for the need of a precautionary approach within a risk analysis.

Research co-operation could also serve the information needs of decision-makers for food law development in the European Union, with emphasis on the risk analysis process. It could also serve the need of the consumers by providing them with essential information, in a more user-friendly manner.

Examples of scientific co-operation in research and policy are included in Appendix 2.

Closer co-operation between scientific institutions of co-operating countries could contribute to improved activities and participation in the work of Codex Alimentarius.

These co-operation and partnership activities and their results will help to establish well-founded and harmonised Food Safety Policy in the co-operating countries and encourage the application of a risk analysis and precautionary approach. In this manner safer and better quality food products can be provided for consumers throughout the region.

#### **4. Institutional and scientific networking projects**

Food safety has become a major scientific and political issue, mainly due to recent incidents such as BSE, dioxin, mycotoxins and microbial contamination. Furthermore society has been faced with dilemmas related to the introduction of modern biotechnology.

The White Paper on Food Safety (COM (1999) 719 def.) extensively discussed ways to ensure the safety of food products and to restore consumer confidence. An essential element in this process (identified in the White Paper) is the formation of a European Food Authority (EFA). In agreement with this development the Dutch government has established the Dutch Food Authority (NVA). The State Institute for Quality Control of Agricultural products (RIKILT) is part of this new organisation.

To encounter some of the recent problems related to food safety, RIKILT has established two European networks:

- European network on safety assessment of genetically modified food crops (ENTRANSFOOD, [www.entransfood.nl](http://www.entransfood.nl))
- European food safety network (EFSN, [www.rikilt.dlo.nl/euprojects/efsn](http://www.rikilt.dlo.nl/euprojects/efsn)).

The most important element in both networks is the establishment of European platforms for communication between all stakeholders. However, the nature of both projects differs considerably.

#### 4.1 European network on safety assessment of genetically modified food crops ENTRANSFOOD, [www.entransfood.nl](http://www.entransfood.nl)

Co-ordination:	RIKILT (Dr. H.A. Kuiper), Wageningen, The Netherlands
Duration:	1999-2002
Number of Participants:	more than 30 research organisations or universities, industries or consumer organisations from 13 EU member states.
Financing:	European Commission Fifth Framework Programme (FP5)
Contract no.:	QLK1-1999-01182

##### 4.1.1 Scope of ENTRANSFOOD

ENTRANSFOOD brings together experts on genetically modification of food crops from academia, food safety research, transgenic plant production companies/plant growers, regulatory authorities, food retailers and consumer groups. Within ENTRANSFOOD four *Working Groups*<sup>16</sup> have been formed to review and evaluate relevant aspects of safety evaluation, risk management and risk communication regarding genetically modified foods and food ingredients.

- Working Group 1 Safety Testing of Transgenic Foods
- Working Group 2 Detection of Unintended Effects
- Working Group 3 Gene Transfer
- Working Group 4 Traceability and Quality Assurance

Working groups meet regularly to prepare position papers that will be discussed further and integrated into position documents by the *Integrated Discussion Platform*, consisting of members of all the working groups, invited experts from academia, industry, regulatory organisations and consumer groups. Two meetings of the Integrated Discussion Platform will be organised. At the final Workshop conclusions and recommendations will be prepared. Specific issues that ENTRANSFOOD deals with are given in Appendix 3.

The Network co-ordinates research activities with respect to:

- joint work planning
- joint production and characterisation of test materials
- exchange of samples between the projects for specific testing
- common use of test facilities
- exchange of research personnel
- exchange of results
- training of young scientists.

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<sup>16</sup> Members of the Groups are experts from different scientific and socio-economic disciplines and co-ordinators of 4 new Research and Technological Development (RTD) projects funded in the framework of FP5:

1. SAFOTEST (QLRT-1999-00651)
2. GMOCARE (QLRT-1999-00765)
3. GMOBILITY (QLRT-1999-00527)
4. QPCRGMOFOOD (QLRT-1999-01301)

#### 4.1.2 Dissemination

Dissemination of results is important for several reasons: to inform the European biotech-industry, scientific community, regulatory authorities and consumers; to facilitate information exchange between scientists of different research disciplines involved in genetic modification of organisms (GMO) research; to stimulate a discussion between scientists, industry, regulators, consumer groups and consumers.

Dissemination methods include use of:

- scientific publications
- popular publications (newspapers, non-scientific magazines, TV)
- press releases
- newsletters
- review and position papers
- flyers
- Internet homepage, including links to related sites.

#### 4.2 European Food Safety Network (EFSN)

Co-ordination:	RIKILT (Dr. H.A. Kuiper and Dr. H.J.P. Marvin), and RIVM (Dr. F.X.R. van Leeuwen), The Netherlands
Duration:	1999 onwards
Number of Participants:	Government-related research organisation, 12 EU member states
Funds:	Currently none

##### 4.2.1 Scope of EFSN

EFSN will facilitate the exchange of information and the development of joint activities among its members, concerning:

- general food safety research,
- research and development for control purposes,
- safety assessment procedures for advice and registration purposes
- the whole feed and food chain.

One of the primary goals is the establishment of a database with information on existing expertise and current research activities across Europe, with respect to food safety assessment. The Network intends to strengthen relationships between its members (in present and future EU member countries and other European countries) for their mutual benefit with respect to the identification of emerging risks and their adequate and efficient assessment.

EFSN hopes and expects to receive guidance from the future European Food Authority. It may provide useful supportive functions to this institution, based on scientific excellence and independence.

##### 4.2.2 Membership of EFSN

Membership is open to all governmental-related institutes active in the field of food safety. Provisional criteria for such institutes include having an advisory function to public authorities and publicly funded research programmes.



The provisional list of participants includes:

- RIKILT (co-ordination, the Netherlands)
- Centre for Substances & Risk Assessment RIVM (co-ordination, the Netherlands)
- Graz University of Technology / Institute of Food Chemistry (Austria)
- Cabinet of the Minister of Public Health (Belgium)
- Min. van Volksgezondheid-Algemene Eetwareninspectie (Belgium)
- EU commission: Joint Research Centre (Belgium)
- ISP-Ministry of Health (Belgium)
- Danish Veterinary and Food Administration / Institute of Food Safety and Toxicology (Denmark)
- AFSSA - The French Agency for Food Safety (France)
- INRA-Scientific Directorate for Human Nutrition and Food Safety (France)
- EELA-National Veterinary and Food Research Institute (Finland)
- Bundesinstitut für gesundheitlichen Verbraucherschutz und Veterinärmedizin BGVV (Germany)
- State Laboratory (Ireland)
- TEAGASC- The National Food Centre (Ireland)
- European Commission / DG Joint Research Centre: Institute for Health and Consumer Protection; Food Products and Consumer Goods Unit (Italy)
- Institute Sup. Technology IST (Portugal)
- Institute of Food Research (United kingdom)
- MAFF- Central Science Laboratory (United Kingdom)

The challenges for EFSN in the coming years are to increase the number of members, development of an early warning system using the existing national monitoring databanks and, to establish open communication between all members, in all European countries. EFNS currently seeks contacts with countries in Central and Eastern Europe that are in negotiations with the European Union. Ideally, the network should operate globally.

Projects such as ENTRANSFOOD and EFSN could be extended to permanent platforms for networking and interaction, with the establishment of associated Centres of Excellence. Complex issues such as genetic modification and food safety and quality issues need this type of approach, which support and link directly to policy making. Appropriate funding (such as that proposed within the EC Sixth Framework Programme) needs to be secured.

The experience of operating in large international networks with all actors involved (research organisations, public organisations, consumer representatives, philosophers and industry) has been very positive. Open discussion and transparency has been appreciated, although shortcomings also have to be recognised.

## **5. Capacity building and new approaches to education and training**

### **5.1 Changing food markets**

The market for food products in Europe has changed drastically in the last two decades: market saturation, demographic changes and consumer attitudes have all contributed. In addition, there is stronger competition in a more unified European market, and liberalisation of the world markets has extended the parameters further.

Consumer demands now play a predominant role in the development of new products and processes, often referred to as *chain reversal*. The way consumers perceive quality has changed: acceptance of a product no longer depends only on the quality of the product but also on the way in which it is produced. There is growing demand for convenience (ready to eat at every time in every place), healthy (functional foods), fresh foods, animal and environmental friendly products, improved sensorial qualities, new and 'exotic' products, and above all, safe foods. Consumers also expect a higher level of transparency and traceability in product composition and production.

*The demands on food producers are more diverse than ever before. This challenges the European food industry to design and produce safe food products that are tuned to the rapidly changing demands and wishes of individual consumers in an enlarged Europe.*

### **5.2 New technological opportunities**

Technological possibilities in food production and processing have increased dramatically offering new opportunities for safe production of existing and new food products. In the past the main aim of new technologies was to achieve higher productivity, cost reduction and process reliability. Given the change towards a consumer-oriented approach, food quality, food safety and environmental demands are becoming determining factors.

Manufacturers actively seek innovative products and process, and technologies that can facilitate those developments. Conventional technologies will be replaced by more advanced ones (such as ultra high-pressure processing, high electric-field pulses, etc.). Thorough risk-assessment is needed before large-scale applications of all new technologies are possible. The development and introduction of advanced process control systems (sensors and robotics for example) will lead to more reliable, safe and/or flexible production lines. Advanced hygienic processing systems will become a prerequisite for future food processes.

### **5.3 Innovation in the food industry**

New products (and or processes) are crucial to successful growth and increased profits for food manufacturers. In particular well-designed innovative products are essential. However, product development is a risky business and has become more complex because of increased consumer demands, and the increased scale of operation of many food companies. A consequence of these developments is that the widely adopted 'trial and error' approach ought to be replaced by more structured approaches based on new insights in innovation management.

Consumer preferences can be translated into technological product requirements throughout the production chain. An emerging concept in that respect is Quality Function Deployment. Advanced

modelling techniques to describe product quality in relation to processing conditions are being developed. An important key to success is to bridge, in an innovative way, the gap between consumer demands or wishes and technological possibilities.

*The future success of food manufacturers depends on the introduction of structured consumer oriented approaches for new product development meeting consumer demands.*

#### **5.4 Education and training**

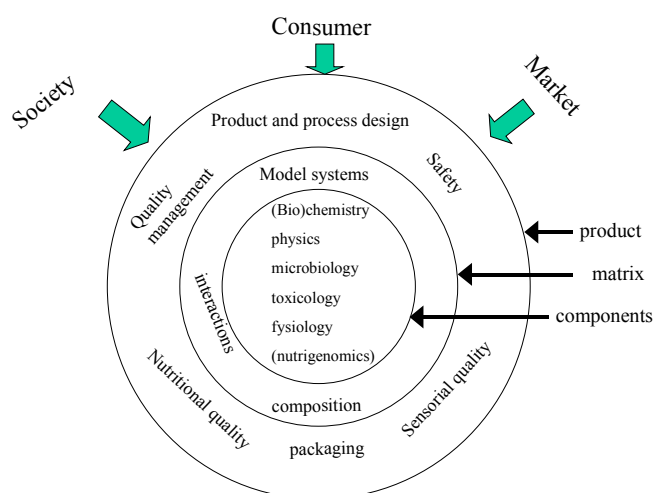
In the development in education and training in Food Science and Technology historically attention was paid mainly to products and commodities. However, it was soon realised that a more general approach based on scientific insights (a disciplinary approach, i.e. chemistry, microbiology, physics and process engineering) would be more fruitful. This approach has brought major advances in the understanding of properties of, and changes in, foods as a result of processing and composition. Food scientists are presently trained to reduce food-related problems to chemical, physical and microbiological problems.

Innovations in the food industry were (and probably still are) mainly based on a *technology push*, meaning that product development is based on an understanding of the food matrix and the technological possibilities. Nowadays, the trend is changing and we are facing a *market pull*, with changing consumer demands, food markets and technologies. Food marketing is no longer based on supply but on demand. With an abundance of food, consumers are indicating the direction of new developments through changes in purchasing behaviour.

These changes imply that product and process design becomes much more important as consumer demands need to be translated in product properties (chain reversal). Food safety and quality can no longer be reduced to chemical or microbiological problems; rather a broader-based integrated approach is needed.

This is not to say that the disciplinary approach is no longer important, on the contrary, but it is not enough. Disciplinary knowledge needs to be integrated in the design process yet because of the complexity of foods this integration does not come naturally. A new approach is needed with respect to training of food technologists where integration is the key.

The interaction with the market, society and consumer is becoming increasingly important, as illustrated in Figure 1 below.



**Figure 1:** Interaction of societal, consumer and market influences on food product and process design.

Apart from the importance of the integrated design process, it becomes also increasingly important to critically assess the environment of food production. Because of the importance of food safety and quality in general, a so-called techno-managerial approach is needed. This implies that management systems need to take into account the special features of foods: quality managers need to be aware of typical food problems. One such a system is HACCP, now widely employed in food manufacture, but it is anticipated that even more sophisticated techno-managerial systems will be needed in the future. In any case, it is necessary to implant this techno-managerial approach within education and training programmes.

### 5.5 Capacity building challenges for process and product design

The ability to design food processes and products according to consumer wishes is of the utmost importance to meet the challenges that the European food industry faces.

Competencies needed include the capacities to:

- develop strategic product concepts based on consumer-oriented product development
- develop and use predictive models for food product design
- develop and use tools for structured product development
- develop and use new technologies to produce new products
- analyse and optimise the various elements in the food production chain via the chain reversal concept.

The key aspect is integration, both of conventional food science and technology disciplines and of socio-economic sciences.

### 5.6 Capacity building challenges for food safety and quality management

The ability to integrate technological and managerial knowledge is very important for food safety and quality design, control, improvement and assurance.

With a particular focus on food safety and quality the quality management skills needed are:

- the ability to apply the techno-managerial approach in food production processes
- the ability to develop and use models for (statistical) quality control
- problem solving skills
- communication skills, with a focus on stakeholders (governments, consumers, NGOs)
- ability to work in multidisciplinary teams
- ability to work in an international context

### 5.7 Capacity building options

Within in the context of food safety, food quality and trade aspects it is essential to consider all of these from the European perspective, especially with regard policy, risk assessment and scientific integration, for example, as proposed within the European Food Authority.

Further co-operation and capacity building is needed at all stages in the food quality and safety chain between all stakeholders, especially between governments, industries and consumer organisations, in order to reach a better level of European integration.

There are several options to enable and facilitate these objectives:

- organising workshops, seminars and conferences
- development of joint MSc programs focussed on food safety such as the present European MSc course in food sciences (website [www.spb.wau.nl/euromscfood/](http://www.spb.wau.nl/euromscfood/))
- Postgraduate training programs, both for product and process design and safety and quality management
- executive courses/training programs for people working in the food industry
- implementation of distance learning concepts for group work, such as within the 'Global Seminar' (website [www.global.cornell.edu/](http://www.global.cornell.edu/)), where Cornell and Wageningen co-operate. Further development of this concept is very promising for future European capacity building.

## 6. Conclusion

This paper has explained the specific projects in Hungary and The Netherlands contributing to institutional and scientific co-operation, networking and capacity building in food safety and quality.

It is evident that recent developments in food safety and quality require closer Pan-European political and scientific co-operation in order to fulfil ever more demanding consumer expectations, throughout an extended European region.

Multi and bilateral scientific co-operation should be further encouraged in the European region. Financial support will be needed and could be provided by the European Commission, as well as by

the national governments to secure the necessary scientific background for the continuous development of food quality and safety.

## **7. Recommendations**

In order to fulfil consumer expectations regarding food safety and quality, for scientific co-operation and research and development, it has been recognised in both political and scientific spheres, that closer co-operation is necessary at the Pan-European level.

- 7.1 Pan-European networks for scientific and policy collaboration on food safety and quality issues could be established and extended further to ensure the efficient delivery of safe quality food and the effective operation of competitive markets throughout the European region.
- 7.2 Multilateral and bilateral scientific co-operation needs a secure financial basis to safeguard and promote continuous development and improvement in food quality and safety. Financial support could be sought from the European Commission, as well as national governments and other international organisations.
- 7.3 Structured consumer oriented approaches should be developed as a basis for success in future safe and good quality food manufacturing processes.
- 7.4 Capacity building programmes based on innovative approaches in education and food production should be established at all levels, graduate, post graduate, executive or distant learning education.
- 7.5 Networking on complex food safety and quality issues should be enhanced with the participation of all stakeholders, preferably on a Pan-European basis, with all European countries. Permanent network or discussion platforms and Centres of Excellence could be established. This could be a stepping stone to a global approach.

**Appendix 1****Details of Exchange Programme Courses undertaken**

Professionals from Hungary participated in the following courses at Wageningen: vegetable production (4), glass house crop production (2), rural extension (5), food processing (5) and protected cultivation (1). Furthermore 55 individuals were involved in various research programmes either in the university or in the research institutes/stations. Five stayed up to one month, 19 from 1-3 months, 22 from 3-6 months, 6 from 6-12 months and 3 for even a longer period. Of these 55, 29 were involved in research in production and/or pest management, 15 in food quality and safety related research and 11 in the other disciplines of Wageningen UR such as environment, forestry, economics and agricultural engineering.

**Appendix 2****Areas for Scientific Co-operation**

Examples of scientific co-operation in research in food safety and quality could include:

- the assessment of quality and safety of food
- surveying and monitoring quality and safety for supply chain management
- development of a network of reference laboratories
- harmonisation of methods of analysis of the main sources of risk to consumer health
- development of new methods (biological, chemical, physical) for determination of hazards (e.g. GMO detection), as well as to determine the bio-availability of food compounds
- development and application of new technologies for ensuring the quality, safety and availability of food
- risk analysis, especially risk assessment and risk communication,
- food safety related to bio-interactions (e.g. allergenicity by GMO).

**Appendix 3****Details of the ENTRANSFOOD project**

**ENTRANSFOOD will focus on the following issues related of genetically modified foods:**

- Are current assessment strategies for GMOs adequate to establish their safety with respect to chronic exposure of humans and animals to respectively foods and feed products?
- Are there specific issues related to the nature of the technology applied, which deserve attention with respect to the safety assessment of GMOs, like the use of antibiotic resistance marker genes?
- Are current analytical and toxicological test methods of sufficient specificity and sensitivity to characterise hazards of newly expressed gene products, and to identify potential changes in the composition of GM-food crops as a result of genetic modification (so-called unintended effects)?
- How can the safety testing of whole foods been improved and which alternative methods could be developed?
- Which detection methods should be applied to detect genetically modified food crops and food ingredients and which thresholds should be established?
- Are quality control systems based on administrative or other procedures sufficient in order to trace GMO materials throughout the food chain?
- Can supply systems be designed to guarantee “GMO-free” foods?
- How can transparency in risk assessment and risk management be improved, and which are the criteria to develop a strategy for proper risk communication?

**CONFERENCE PAPER****RAPID ALERT SYSTEM FOR FOOD PRODUCTS IN THE EUROPEAN UNION AND ITS POSSIBLE EXTENSION TO OTHER COUNTRIES IN THE REGION.**

The development of harmonised regional strategies  
for food safety and the implementation  
of food security communication networks.

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the European Commission

**Overview**

*This paper introduces the European Community's Rapid Alert System. It explains the legal basis of the system, the detailed procedures of its application and how the system works. Proposed improvements to the System are discussed, as are the underlying principles for such a communication network. The paper concludes by highlighting further opportunities for agreements with other similar systems, including those developed by third countries or other organizations, and the creation of a network to cover the entire European region.*

**1. Introduction**

The globalisation of trade in foodstuffs is a phenomenon destined to accelerate as tariff and non-tariff barriers are removed. It is particularly marked in the European Community where the creation of a common market and then of a single market have allowed food supplies to circulate freely throughout the fifteen Member States and be purchased by more than three hundred million consumers. The abolition of health controls across the Community's internal borders has given rise to a need for new instruments to deal with situations where dangerous products could circulate without any controls. The creation of a rapid alert system is one of these instruments.

The Member States felt the need from a very early stage to exchange information regarding the safety of food products placed on the market. For the single market to run smoothly national health authorities must have confidence in their counterparts' control of the situation in other Member States and in the transparency of the system. One of the conditions on which the proper functioning of the market depends is the speed with which information about risks relating to consumer products (that may be placed on the market) is made known and the accuracy of such information.

**2. Description of the European Union's Rapid Alert System****2.1 The legal basis**

The European Community has had a rapid alert system since 1978. It was first established by a Council decision as a general short-term warning system to deal with immediate and serious threats

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<sup>17</sup>The opinions expressed by the authors do not necessarily reflect the position of the European Commission.



to the health and safety of consumers. This decision was replaced in 1989 by another Council decision to set up a Community system for the rapid exchange of information on dangers arising from the use of consumer products. This decision was in turn replaced by a specific provision in Council Directive 92/59/EEC of 29 June 1992, regarding the general safety of products. Article 8 of this Directive currently provides the legal basis for the European Community's rapid alert system for both the food sector and other consumer products. Although destined to be modified in the near future it is nevertheless worth briefly mentioning the principles that have underpinned the Community system for many years.

The Member States have a duty to provide information in the case of a serious and immediate risk to the health of consumers. Such information should be provided as a matter of urgency. It is applicable to all consumer products, food and non-food, insofar as these products are not already covered by specific equivalent provisions in other Community acts.

Strictly speaking Member States are obliged to inform the Commission only in cases where the dangerous product could be sold outside the territory of the Member State that has identified the specific risk. But in practice, as the single market becomes ever more integrated it is becoming increasingly difficult to be sure that a product will not go beyond the borders of a given Member State and therefore it is better to notify in any case.

The Directive also sets down the Commission's responsibilities: first, to ascertain that the information falls within the scope of the Directive and second, to forward the information to all the other Member States.

There are currently two liaison networks: the food products network and the non-food products network. The list of contact points and officials responsible for these two networks, complete with addresses, telephone and fax numbers, is confidential and may only be given to members of the network. The list enables members to keep in touch with the Commission and Member States so that minor points can be clarified quickly and easily. When new information of general interest is provided through such inter-Community contacts, the Member State that initiated the bilateral contact informs the Commission. Only information received or confirmed through contact points in the Member States can be considered as having been received through the rapid exchange of information procedure.

The food sector network has progressively developed harmonised procedures and criteria based on consensus among the Member States. From a practical point of view, the system has constantly evolved to integrate, as far as possible, all that current computer and information technology has to offer.

## **2.2 Detailed procedures for the application of the Community system for the rapid exchange of information.**

2.2.1 This system has been essentially designed so that information can be exchanged rapidly in the event of a serious and immediate risk to the health and safety of consumers. It is impossible to lay down specific criteria as to what precisely constitutes an immediate and serious risk; in this regard, the national authorities will therefore judge each individual case on its merits. As soon as a serious and immediate risk is detected, the national authority

shall consult, insofar as possible and appropriate, the producer or distributor of the product concerned. Their point of view and the details they supply may be useful both to the administrations of the Member States and to the Commission in determining what action should be taken to ensure that the consumer is protected with the minimum of commercial disruption. To this end, the Member States should endeavour to obtain as much information as possible on the products and the nature of the danger, without compromising the need for rapidity.

2.2.2 As soon as a Member State has detected a serious and immediate risk, the effects of which extend or could extend beyond its territory, and measures have been taken or decided on, it shall immediately inform the Commission. All available details will be given, in particular on:

- a) information to identify the product;
- b) the danger involved, including the results of any tests/analysis which are relevant to assessing the level of risk;
- c) the nature of the measures taken or decided on;
- d) information on the supply chains where such information is available.

2.2.3 If the Member State considers certain information to be confidential, it should specify this and justify its request for confidentiality, bearing in mind that the need to take effective measures to protect consumers normally outweighs considerations of confidentiality. It should also be remembered that precautions are taken in all cases, both by the Commission and by the members of the network in the various Member States, to avoid any unnecessary disclosure of information likely to harm the brand image of a product or series of products.

2.2.4 The Commission shall verify that the information received complies with the notification criteria, contact the notifying country, if necessary, and forward the information immediately by electronic mail to the relevant authorities in the other Member States with a copy to each permanent representation; these authorities may also be contacted by telephone at the time of sending the e-mail. The Commission may also contact the Member State presumed to be the country of origin of the product to carry out the necessary verifications.

2.2.5 At the same time, when it considers it necessary and in order to supplement the information received, the Commission can in exceptional circumstances institute an investigation of its own and/or convene the appropriate Committee. In the case of such an investigation being undertaken the Member States shall supply the Commission with the requested information to the best of their ability.

2.2.6 The other Member States are requested, wherever possible, to inform the Commission without delay of the following:

- a) whether the product has been marketed in its territory;
  - b) supplementary information it has obtained on the danger involved, including the results of any tests/analyses carried out to assess the level of risk;
- and in any case they must inform the Commission as soon as possible of the following:

- c) measures taken or decided on;
- d) when the product mentioned in this information has been found within their territory, but no measures have been taken or decided on, and the reasons why no measures are to be taken.

2.2.7 When a Member State intends, apart from any specific measures taken because of serious and immediate risks, to modify its legislation by adopting technical specifications, the latter must be made known to the Commission at the draft stage, in accordance with Directive 98/34/EC<sup>18</sup>, referring if necessary to emergency measures.

### 2.3 How the system works

The rapid alert system covers the fifteen Member States and the countries of the European Economic Area (Norway, Liechtenstein and Iceland). It does not cover other countries.

Each Member State and associated country must establish an official food-product contact point to liaise with the Commission contact point in the rapid alert network.

From a practical point of view, the system has, over time, developed three levels of information to be exchanged between the Member States and the Commission: warning notifications, information notifications and news.

#### 2.3.1 Warning notifications

These notifications warn about risk factors for products that have already been placed on the market in more than one Member State and require immediate action to find and withdraw them from the market. The warnings are sent out by the official contact points of the Member States and associated countries when a problem has been detected and measures have been or are going to be taken. Sometimes, however, the media is faster and the Commission is informed by the press before the notification is sent out via the rapid alert network. In this case the Commission immediately contacts the country that is the source of the information to seek confirmation or further information about the problems.

#### 2.3.2 Information notifications

The activities of the rapid alert system have steadily been extended, on a voluntary basis, to situations that may not require immediate action (because the product at fault has not been put on the market), but where the information is useful to the other participants in the network. The results of the safety monitoring carried out on imported food products at point of entry to the Community (or the European Economic Area) is one such case. Since non-compliant products could be a risk they are not allowed into the Community and will not therefore be put on the market. Nevertheless it is useful to disseminate such information so that the other Member States and associated countries can make sure these products do not turn up at the border checkpoints of another Member State and that future shipments are subjected to the appropriate checks. The Commission therefore circulates this information for the same reason as the warnings.

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<sup>18</sup> Directive 98/34/EC laying down a procedure for the provision of information in the field of technical standards and regulations.

### 2.3.3 News

Other useful information about health and safety problems in respect of foodstuffs, which the Commission has not been informed of by a Member State or associated country in a warning or information notification, but which it thinks may be of interest to the monitoring authorities, is sent out on the network as “News”. An example of this is information from the monitoring systems of third countries about products that tend to be found on international markets. Information from the Canadian Food Inspection Agency, the US Food and Drug Administration (FDA), the Australia and New Zealand Food Agency (ANZFA) and others have in the past helped to identify food products on the European market that have already been subjected to controlling measures in these countries.

Owing to the as yet incomplete Community harmonisation of standards for contaminants and microbiological criteria, warning and information notifications are often based on levels in excess of national standards and criteria. In all cases the Commission’s services assess the information received and decide which category they come under for dissemination by the rapid alert system.

## 2.4 Communication with third countries

There is no provision for the participation of third countries in the rapid alert network established by Directive 92/59/EEC: with the exception of the European Economic Area, such participation is beyond the scope of this Directive. Nevertheless, although there is no legally binding basis, the Commission informs the appropriate authorities of third countries through diplomatic channels in two circumstances:

- When investigations into the marketing of a food product that has been the subject of a warning notification reveal that the product has been exported to a third country, the authorities of the third country are informed of this.
- When an information or warning notification concerns a food product imported from a third country, the authorities of the third country are informed of the notification, if possible by sending them a copy of the health certificate required for importing this food product, so that they can take the necessary steps to correct and avoid repetition of the problem.

## 3. Proposed improvements to the European Community’s Rapid Alert System for food products

The system established by Directive 92/59/EEC has been functioning for ten years, in the course of which the problems that have surfaced have been compensated for by a flexible approach, on a voluntary basis, there being general consensus between the Commission and the Member States.

The Commission has made a proposal for a regulation of the European Parliament and Council establishing the general principles and prescriptions of food legislation, setting up the European Food Authority and laying down the procedures regarding the safety of foodstuffs. This proposal contains provisions aimed at establishing a new rapid alert system, as a network, to give notification of direct or indirect risks to human health deriving from foodstuffs or animal feed.

The scope of the proposal is to extend the rapid alert system to all food products destined for human and animal consumption, and to encompass all direct and indirect risks whether the effects are

immediate or not. It is also to be extended to cases when, for reasons of consumer safety, a foodstuff or animal feed is refused entry by the competent authorities at European Union border checkpoints.

The network will link up the Member States, the Commission and the new European Food Authority. When a member of the network has information regarding a serious direct or indirect risk to human health associated with a foodstuff or animal feed, the information should be forwarded immediately to the Commission via the rapid alert network. The Commission will therefore remain the central hub of the system. The Authority may then complete the notification with any scientific or technical information to facilitate rapid and appropriate risk management.

In the case of a batch being rejected by the competent authorities at border checkpoints, the Commission will immediately have to inform all the contact points in the network, all the border checkpoints in the European Union as well as the competent authorities of the country of origin. Likewise, when investigations reveal that foodstuffs or animal feed that have been the subject of a rapid alert may have been exported to a third country, the Commission will have to provide the authorities of this third country with all the necessary information.

Finally, participation in the rapid alert system could be extended to third countries or international organisations through agreements between the Community and these countries or organisations, and in ways that would have to be defined in the agreements.

#### **4. The underlying principles of a European food safety communication network**

The European Community has gained much experience in operating a food risk information network for its fifteen Member States. The system only works correctly if the work of centralising the information, analysing it and redistributing it to all the participants in the network is orchestrated by a single body. In the European Community, the Commission plays this role. If such a network were to be established for the whole of Europe, a similar body would have to be identified to play this role.

Moreover, the Codex Alimentarius has adopted directives concerning the exchange of information in food control emergency situations (CAC/GL 19-1995), and the exchange of information between countries regarding refusal to allow foodstuffs to be imported (CAC/GL 25-1997). These directives provide the basis for structured exchanges of information between an importing country and an exporting one. They are also relevant to, and must be taken into account in, the setting up of information exchange systems in networks linking several countries, groups of countries and/or organisations.

If a rapid alert system is to be set up for the whole of Europe all the partners must reach agreement on the underlying principles of the system. These principles may be summarised as follows.

##### **4.1 Reciprocity**

Each country wishing to participate in the European rapid alert system must be in a position to offer its partners the same quality of information that it receives, which presupposes the setting up of systems for information gathering, analysing and tracing food products equivalent to those of the partners in the network.

**4.2 Pro-activity**

The system must be pro-active, not a passive information system that simply puts information on an Internet site. Each country wishing to participate must establish an official national contact point. The list of national contact points must be available to all the participants in the network with addresses, e-mails, telephone and fax numbers. Information regarding the risks and measures taken must be sent without delay to each contact point.

**4.3 Precision**

The information sent over the rapid alert network must be accurate and clearly defined. The food product in question must be described as accurately as possible including the quantities of product involved, the dimensions and type of packing, the manufacturer's batch number or the use-by date, trade names and any specific labelling such as trademarks and other identifying labels, the name and address of the producer, the manufacturer, and the seller or importer. Information about the marketing and distribution of the product in question is essential to trace the products as quickly as possible. Measures taken to reduce or eliminate the risks must also be described accurately, identifying the bodies that oversee their withdrawal from the market, the impounding of products and their eventual destruction.

**4.4 Certainties**

The nature of the identified risk must be clearly defined on the basis of objective observation. The precise nature and extent of the danger must be known with certainty and the information must identify the contaminating agent or toxin and, if possible, contamination levels and their possible effect on consumers. The results of laboratory tests are an important part of this information. Nevertheless, if there is a clear link between the consumption of a foodstuff and serious effects on consumer health, it should be made known without waiting for final confirmation, even if the agent responsible has not yet been expressly identified.

**4.5 The All Clear**

Withdrawal of a product from the market can have a serious economic impact on the sector. When the source of the risk has been eliminated and the dangerous product has been effectively removed from the market, an "all-clear" message should be put out over the network to inform all the contact points and allow the national authorities to relax their controls.

**5. Conclusion**

The European Community can draw on its long experience operating a rapid alert system for foodstuffs. This experience now enables it to propose to the Council and the European Parliament substantial improvements to the system, broadening its scope and clarifying its relations with third countries. This proposal also contains opportunities for agreements between the Community rapid alert system and other systems developed by third countries or organisations. Although the creation of a network to cover the entire European region is no mere Utopian idea, all the parties involved must agree on the fundamental principles governing the development and functioning of such a network.

**CONFERENCE PAPER****EMERGING RISK IDENTIFICATION SYSTEM - ERIS  
INFORMATION EXCHANGE AND NETWORKING****The Netherlands and Romania****Overview:**

*This paper describes the initiative to set up a new system to identify emerging, or unforeseen risks to food safety. No such risk management system, to identify new or unforeseen risks, has previously been developed.*

*In co-operation with the EU, FAO and WHO, the Netherlands is trying to set up such a system and to make it work for all. This paper explains the system, how new or unforeseen risks can be identified, and how the system might develop and operate in the future.*

The success of this new system, called 'Emerging Risk Identification System' (ERIS), depends on regular input on all relevant aspects of food safety. Validated (and even non-validated) scientific information from every country (ministries and research institutes) will be crucial for the success of this new system.

Co-operation and input of all countries is needed to make this system operational. The PEC provides the opportunity for review of this stage of ERIS, to gather input and discuss the initiative further, throughout the European region.

**1. Background**

An 'Emerging Risk Identification System' (ERIS) for food safety will allow risk assessors to identify new and unforeseen risks to food safety and therefore to public health, and alert risk managers to these at an early stage. Through early identification and recognition of potential new risks, timely management measures can be taken to avoid emergencies. An Emerging Risk Identification System will only be effective if it is internationally introduced, and implemented in a harmonised way.

With the European Union's Rapid Alert System (RAS EU) Member States can inform each other about known potential food safety risks. There are standards for many hazards (pesticides, contaminants) and if these are found to have been exceeded in data monitoring, the RAS is activated. Such irregularities can be detected by nationally and internationally harmonised monitoring and survey programmes. One example is the national 'Residue Programme' that is set up by the European Commission and has to be implemented by each EU Member State.

The Eastern European countries also have monitoring systems to check for known food safety risks. Romania, for instance, has an information system that receives input from local and national

veterinary networks, as well as veterinary border posts. Romania is striving to implement national measures in conformity with EU legislation. Multilateral organisations such as FAO and WHO, also have an alert system for signalling food supply problems on human and animal health, and known food safety risks on human and animal health.

All these systems, however, concern *known* food safety risks. Worldwide there is no system that allows countries to identify unknown food safety risks. The purpose of ERIS is the early identification of potential new risks or unforeseen risks, so that action can be taken in time to avoid a food safety crisis. ERIS will focus on *new and unforeseen risks* and not with the *recurrence of known risks*.

There is no international system, as yet, that provides a survey of validated or ongoing research, and indicates whether or not new food safety risks are to be expected. A systematic approach could warn risk assessors at an early stage and allow risk managers to anticipate potential risks, by commissioning further research or adapting policy.

This paper describes:

- ERIS: A new risk management instrument;
- Present stage of the ERIS-project
- Involved organisations and communication
- The European Food Safety Network (EFSN) as part of ERIS
- Possibilities for setting up ERIS and EFSN in Eastern European countries - the experiences of Romania

In addition to this Conference paper, the Dutch delegation to the 'PAN-European Conference on Food Safety' will report the results of pilot projects carried out since September 2001. A demonstration of software that is especially tested for the ERIS system will be presented. This software collects and processes information. Furthermore an overview of possible indicators<sup>19</sup> which could (in)directly pose new or unforeseen risks to food safety will be identified and presented for discussion.

## **2. Emerging Risk Identification System: A new risk management instrument**

ERIS is a risk management instrument to collect, combine and signal new<sup>20</sup> and unforeseen<sup>21</sup> risks to human health in an early stage. The objective of ERIS is to identify unknown potential food safety risks in an early stage so that action can be taken in a timely manner. In order to achieve this an interdisciplinary approach is taken to collect, combine and analyse signals in a structural way, throughout the food supply chain. The system should support knowledge-based food policy and will be the basis for scientific food safety management recommendations.

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<sup>19</sup> Indicators: Indicators are measurable parameters that refer to a discipline (like the environment) and can be (in)directly related to food safety problems by a change of state. See example.

<sup>20</sup> A new risk is a risk that has been examined and determined by scientific researchers and is based on scientifically validated or non-validated results. Results of the risk assessment show that this new risk (probably) has negative effects on human health. New risks might be a new virus, new bacteria, new prions, new mycotoxins or new plant toxins.

<sup>21</sup> An unforeseen risk is a risk that already exists in areas with other environmental conditions (temperatures/moistness) or in other types of food products. Unforeseen risks can be known viruses, bacteria, prions, mycotoxins, plant toxins, or biotechnological effects.



This systematic approach would give risk assessors timely warning and allow risk managers to anticipate potential risks and initiate further research, or adapt policy. It is important that risk assessors and risk managers respond adequately to these warnings and do not try to conceal potential new risks from the public.

The organisational structure below shows that ERIS receives its input from different scientific sources. This information can vary between disciplines (e.g. environmental science, animal health, regulations,) and research institutes. It is most crucial that for each discipline, concrete indicators are identified which could pose new food safety risks by changing their state.

**Example of a possible influence from an indicator:** As a consequence of global warming (discipline: environmental science) there is a risk that temperatures and humidity (indicators) in Europe will change. Such changes may well have lasting consequences on the emergence of new or more mycotoxins, which can pose new risks to food safety in this region of the world. In this case temperature is an indicator

**Table 1:** Some additional disciplines and related indicators.

<b>Discipline:</b>	<b>Indicator:</b>
Environmental science: - Climate  - Soil	<input type="checkbox"/> Temperature <input type="checkbox"/> Humidity  <input type="checkbox"/> Erosion <input type="checkbox"/> Soil quality
Production process:	<input type="checkbox"/> Nature of storage <input type="checkbox"/> Duration of storage <input type="checkbox"/> Humidity <input type="checkbox"/> Processing techniques
Management instruments:	<input type="checkbox"/> National legislation <input type="checkbox"/> (inter)national legislation <input type="checkbox"/> enforcement <input type="checkbox"/> HACCP
Veterinary medicine:	<input type="checkbox"/> Animal diseases

### 3. Present stage of the ERIS project

The conditions for setting up an optimally functioning ERIS are quite complex. It is important that at this stage all relevant information is gathered about existing systems and about relevant scientific data, and experts that could support ERIS. The project is currently in the inventory stage.

The Netherlands has divided the ERIS project into 4 different sub-projects:

1. An inventory of indicators which could pose (in)direct new risks to food safety by changing their state. National and international experts on risk management, risk assessment, consumer organisations and industry and countries/international organisations will be consulted to give their input and contribute to the success of ERIS.

2. Development and adaptation of a powerful software tool to support the goals of the project. This software must be a search engine that must fulfil various functions, which will form the most essential basis for an optimal working ERIS. This system must be able to systematically collect information on scientific data and scientific experts, and to analyse and signal new information about indicators in relation to food safety risks.
3. The scientific sources of input for ERIS have to be identified and approved by scientific experts from different disciplines and countries. The expertise of the European Food Safety Network (EFSN) (See section 5. below) will therefore be tapped into and possibilities will be explored to expand and refine EFSN.
4. This new way of thinking and informing risk assessors and risk managers at an early stage must become widely accepted. The Netherlands is willing to contribute actively to this process of acceptance. We would like to communicate with all stakeholders (e.g. EU/WHO/EU/consumer organisations/food industry) about this new and systematic approach to risk communication between risk assessors and risk managers.

In March/April 2002 the inventory study will be evaluated and a decision will be taken about a European, or even worldwide implementation of ERIS.

#### **4. Organisations involved**

At the moment different organisations are contributing their general and specific knowledge to the four sub-projects above. These are:

- The Dutch ministries and research organisations concerned
- Representatives of consumer organisations and the food production business in and outside the Netherlands
- European Commission
- Food and Agriculture Organisation (FAO)
- World Health Organisation (WHO)
- Romania (Ministry of Agriculture).

#### **5. The European Food Safety Network as part of ERIS**

The European Food Safety Network (EFSN) is a joint activity of independent government-linked institutes, managed by a 'Core Planning Group' consisting of representatives from Denmark, France, Germany, Ireland, the Netherlands and the United Kingdom. The secretariat is at The State Institute for Quality Control of Agricultural products (RIKILT) in The Netherlands.

The aim of EFSN is to improve contacts between scientific experts, to achieve a more rapid and effective information exchange and improve the availability of mutual assistance in case of a problem.

EFSN is a database maintained by public institutes, which are active in the area of food safety, and some scientific experts. At the moment 12 countries within the EU are participating. The EFSN database can be used as a starting point for the network of scientific experts for ERIS. In the near future the EFSN secretariat is planning to expand the database to:

- include scientific institutes and experts of other disciplines which are (in)directly related to food safety;

- refine the background of the scientific experts (Curriculum Vitae, related scientific articles) who are (in)directly related to food safety.
- Countries inside and outside the EU.
- Institutes outside the public domain that may be invited to participate in specific activities (working groups, committees).

#### **6. Possibilities for setting up ERIS and EFSN in Eastern European countries: comments from Romania**

The Romanian government welcomes the initiative for the development of ERIS and is willing to take part in this project. The present organisations involved are from the Romanian veterinary and food safety network work according to a 'pyramid' structure, in which all information obtained in local laboratories or services is transferred to central Institutes for monitoring.

At the current time Romania is striving to bring its legislation into harmony with EU legislation. Romania is willing to participate in ERIS and EFSN networks, and will provide the names of experts in veterinary, biochemical, chemical, biological and other relevant sciences, who could provide relevant information and data.

Romania is willing to serve as a contact country for ERIS and EFSN for the eastern European region, and will support an open and transparent information exchange, as well as striving for harmonised implementation.

Romania encourages other East European countries to participate in ERIS and EFSN; and to comply with the requirements and the new concepts regarding food quality and food safety.

#### **7. Recommendations**

ERIS is at an inventory stage till April 2002, at that time a decision will be taken on implementation. The proposed recommendations are divided into recommendations during the inventory stage and during implementation stage.

##### **Conference participants are invited to:**

- 7.1 Give their opinions to the objectives and the use of a new manner of thinking by involving different relevant disciplines and a new systematic approach, by using ERIS.
- 7.2 Give their opinion whether ERIS could improve the communication between risk managers and risk assessors within a country or even between different countries.
- 7.3 Make suggestions and recommendations to ensure ERIS meets the needs of users (risk managers and risk assessors) for exchange of information.
- 7.4 Consider the benefits of setting up a European or even worldwide ERIS-system by providing and sharing national validated (or non-validated) information on scientific research and/or scientific experts to anticipate on possible new or unknown food safety problems at an early stage.

**CONFERENCE PAPER****A MECHANISM FOR THE EXCHANGE OF OFFICIAL INFORMATION  
ON FOOD SAFETY, ANIMAL AND PLANT HEALTH****FAO****Overview**

*This paper describes an FAO initiative to provide a single mechanism - the Biosecurity Portal - for the exchange of official information on food safety, animal and plant health, as related to the FAO mandate. Information will be provided from national and international agencies maintaining 'ownership' of the information. FAO will provide the mechanism and technical support for the Portal so that official information can be made available and readily accessed in a coordinated way. Examples of the type of information that could be accessible via the Biosecurity Portal are given, as is the likely technical assistance that FAO could provide to facilitate this. Access to the Biosecurity Portal will be widely available and free, although certain areas may be developed with restricted access limited to Member countries. It is Internet based to ensure wide usage and cost effectiveness.*

**1. Introduction**

Public concerns and awareness over food-borne illnesses, plant health and animal health are increasing, and sanitary and phytosanitary issues are becoming increasingly complex and rigorous due to globalization. Many countries are struggling to keep pace with changes due to globalization factors, rapid advances in technology, and often lack access to basic information essential for food safety, animal health and plant health. Access to such official information is of paramount importance for countries to protect human health, agriculture and the environment. Such information is necessary to ensure safe trade and traffic.

The WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) and the Agreement on Technical Barriers to Trade (TBT Agreement), respectively, establish that members shall ensure that any sanitary or phytosanitary measure is applied only to the extent necessary to protect human, animal or plant life or health, and is based on scientific principles. Having easy access to relevant international standards and to reliable up-to-date information about the sanitary and phytosanitary legislation, regulations and the sanitary and phytosanitary conditions of other countries and relevant scientific information creates a common ground for determining equivalency and assessing risk.

At the same time, as the need for relevant information has increased, access to such information has become more problematic. The proliferation of digital information sources, advances in computing

systems, and the continuing Internet networking and communications revolution have caused the creation of information to outpace our ability to organize, search and access it. Therefore, FAO sees an urgent need for a mechanism by which the relevant information already available is accessible in a systematic manner and made available to all interested parties in a transparent way, using modern information and communication technologies.

## **2. Biosecurity and Agriculture**

Food safety, animal health, and plant health are the three sectors which fall within the concept of biosecurity. Biosecurity encompasses all policy and regulatory frameworks (including instruments and activities) to manage risks associated with food and agriculture (including relevant environmental risks), including fisheries and forestry. These sectors include food production in relation to food safety, the introduction of plant pests, animal pests and diseases, and zoonoses, the introduction and release of Genetically Modified Organisms (GMOs) and their products, and the introduction and safe management of invasive alien species and genotypes.

Recent developments in biosecurity in food and agriculture include the tendency toward integration of and cooperation across sectors. Internationally, this tendency is demonstrated in the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), and the Convention on Biological Diversity (CBD) and its Cartagena Protocol on Biosafety<sup>22</sup>. It is further addressed in the FAO/WHO Codex Alimentarius, the International Plant Protection Convention (IPPC) and the FAO Code of Conduct for Responsible Fisheries. Nationally, this is shown by the recent tendency for the integration and institutionalization of the three sectors, namely food safety, plant life and health, and animal life and health e.g. the MAF Biosecurity Authority in New Zealand, Biosecurity Australia in Australia, and the Department of Environment, Food and Rural Affairs (DEFRA) the United Kingdom.

The more obvious common components in biosecurity include risk analysis, international standard setting, capacity building, surveillance and monitoring, and the exchange of information. The rest of this paper will concentrate on the exchange of biosecurity information.

## **3. The FAO Biosecurity Portal**

Within the context of the biosecurity initiative in FAO, an electronic information exchange mechanism (i.e. the Biosecurity Portal) has been established and is currently being developed by FAO and relevant biosecurity partners. This is a major initiative that will include the various international agencies and partners involved in food safety, animal and plant health. Some of these partnerships are already in the process of being developed (e.g. with the Office International des Epizooties (OIE), the World Health Organization (WHO) and the Convention for Biological Diversity (CBD) Secretariat) and others will be developed in the near future.

FAO provides the neutral forum that is essential for all Member Nations to contribute and benefit from this initiative on an equal basis. The neutrality of FAO and that of other relevant international

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<sup>22</sup> The term biosafety is used in the Cartagena Protocol on Biosafety where it refers to the safe transfer, handling and use of living modified organisms possessing a novel combination of genetic material obtained through the use of modern biotechnology.

agencies will ensure the necessary credibility for wider participation in the Biosecurity Portal. International co-operation is essential for meeting global and national goals of improving food safety and agricultural health. FAO will be responsible for the co-ordinated management of the shared resources and responsibilities of the programme.

Member Nations will be able to follow the progress in the developments of the Biosecurity Portal through the intergovernmental process of the different programmes of FAO, such as IPPC, Codex Alimentarius, animal health, and biosecurity in relation to Fisheries and Forestry.

FAO's contribution will also address the issue of quality of information access, focusing on criteria such as accessibility, retrievability, timeliness, efficient workflow, consistency, language coverage, participation, navigation, preservation of information resources, and security of information. This will be done by ensuring the Portal provides the services required by the Members and engaging Members in the development of the Web site.

The main users of the Biosecurity Portal will be national institutions and regional organizations involved in food safety, animal and plant health, and those authorities involved in food and agricultural trade. However, a wide range of other users may benefit from the information and data to be provided through the Biosecurity Portal, including industry, scientists, students, private and civil society organizations (NGOs), and the media. Access to the Biosecurity Portal will be free to all. However, certain parts of the Portal may be restricted to Members access only due to confidentiality issues and trade sensitive information.

#### **4. Development and Content**

This Biosecurity Portal will provide a portal, or single access point, for official national and international information on food quality and safety, plant health, and animal health. The data will be maintained as a collaborative effort between national and multilateral partners, each in their respective areas of authority and expertise.

Member Nations would be responsible for data entry through a process of secure remote access (i.e. passwords). While the information to be provided through the Biosecurity Portal would primarily be available electronically through Internet and CD-ROM, a synthesis of this information would be made available periodically in hard copy for distribution to those who have neither access to Internet nor to CD-ROM.

The following table gives an indication of the type of information that could be accessible via the Biosecurity Portal. It is important to note that national authorities, and other relevant and authorized regional or international agencies, will provide the official information accessible through the Biosecurity Portal.

International sanitary and phytosanitary standards:

- international food standards,
- animal health standards, and
- international standards for phytosanitary measures;

International scientific evaluations:

- food additives, and chemical contaminants and toxins in food,
- veterinary drugs (JECFA),
- pesticide residues (JMPR), and
- microbiological contaminants;

National legislation and regulations:

- food safety,
- animal health, and
- plant health;

International and national alert/reporting systems:

- food- and feed-borne infections and intoxications,
- occurrence, introduction and outbreak of plant and animal diseases and pests,
- introduction of marine and inland water species, and
- aquaculture-related fish food safety problems;

Official scientific material:

- national risk analyses and other national scientific evaluations (e.g., of food additives, contaminants, toxins, veterinary drugs, pesticide residues; genetically modified foods; irradiated foods; microbiological contaminants; animal or plant diseases or pests etc),
- methodologies for risk analysis,
- methods of analysis, and
- survey methodology, etc.;

Official contact points and related other official information;

- national official contact points, and
- references laboratories;

Biosecurity related information:

- information concerning other sources,
- links, and
- activities and news.

All information will, as necessary, include disclaimers with regard to ownership and reliability. Ownership and liability for information remain with the provider of the information.

## **5. FAO technical assistance**

Since its founding in 1945, FAO has had at the heart of its mandate a responsibility to provide its Members with technical advice and assistance related to agricultural production and trade in food and agricultural products. Consequently, FAO provides scientific and technical expertise on a wide range of agricultural and food related topics. In line with its mandate and the three major areas of its programme, which include providing information, providing a forum for international debate for issues related to food and agriculture, and rendering technical assistance to its Member Nations, FAO seeks, within its means and resources, to help countries realize the positive impact of food safety and

agricultural health (including the utilization of biotechnology and to minimize possible negative effects).

It is envisaged that technical assistance will play a key role in developing the Biosecurity Portal with Members and ensuring developing country participation. In terms of information exchange, FAO's technical assistance is likely to be provided in the following areas:

development of national strategies for the exchange of official information on biosecurity, specifically food safety issues;

- training and manpower development for participation in the Biosecurity Portal;
- awareness and understanding of information exchange obligations through international treaties, agreements and conventions;
- assistance in programme development;
- institutional infrastructure and capacity;
- assistance in the development of information exchange facilities;
- assistance in systems management;
- facilitation of technical cooperation between institutions and governments;
- training sessions for national authorities on the use of the Biosecurity Portal and data input;
- tailored training sessions to targeted audiences on the use of the Biosecurity Portal; and
- participation in the global exchange of official biosecurity information.

Many developing countries, and some countries in transition, lack the capacity (both technology and infrastructure) to meet their international obligations with respect to the exchange of information on food safety and agricultural health. Technical assistance through FAO to help these countries strengthen national food control, animal and plant health information systems is foreseen. However, significant additional resources will be required from relevant national and international partners. Such partnerships are already in the process of being developed and the inter-agency development programme needs to be expanded further.

## **6. Concluding remarks**

The success of Biosecurity Portal will necessitate national and international participation in both the development and implementation of this information exchange mechanism. Such coordination and participation is likely to involve a great deal of work, commitment and resources. However, a successful, effective and functional Biosecurity Portal would ensure the framework in which national authorities can meet their international biosecurity information exchange obligations, improve transparency, facilitate trade, and assist countries in ensuring that consumers have confidence in the quality and safety of the food supply, regardless of its origin, while protecting animal and plant life and health.

## **7. Recommendations**

Conference participants are invited to:

7.1 *View the Biosecurity Portal and make suggestions and recommendations to ensure the Portal meets the needs of users for the exchange of official biosecurity information;*



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- 7.2 *Urge* relevant national authorities or inter-governmental organizations participate in developing the Biosecurity Portal;
- 7.3 *Urge* relevant national authorities or inter-governmental organizations utilize this system as per their mandate; and
- 7.4 *Consider* the benefits of providing and sharing national information in this way and using the Biosecurity Portal as the preferred / primary mechanism for the exchange of official food safety, animal and plant health information.

For further information on this initiative please contact:

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**CONFERENCE PAPER****CONSUMER INFORMATION AND PARTICIPATION IN INTERACTIVE COMMUNICATION  
WITH CONSUMERS ON FOOD SAFETY AND QUALITY**

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**1. Introduction**

Independent consumer organizations are essential elements in the interactive communication process with consumers on food safety, risks and food quality. Within the European Economic Area, at least, these organizations enjoy a very high degree of public or consumer confidence, as compared to other sources of information or advice. Consumer organizations are regarded as trustworthy by most Europeans (55%), just ahead of the medical profession (53%) and environmental protection organizations (45%) but well ahead of universities (26%), animal protection organizations (25%), television and newspapers (20%), international institutions (17%), national public authorities (15%), farmers' associations (15%) and religious organizations (9%) according to the findings of a Eurobarometer Poll in 2000.

Elsewhere in Europe, with some exceptions, independent consumer organizations are of relatively recent origin but are well placed to win public confidence, given the right support. They must be supported (and their independence protected) as an essential contribution to public discourse and decision making on food and food policy.

People are often more influenced by bad news than persuaded by good news. The influence of consumer organizations can be somewhat asymmetric although the same can be said about other NGOs, the media, politicians and others. Bad news travels faster and further than good news. Nonetheless, independent consumer organizations are significant factors in forming public perceptions of food safety risks and quality. Therefore the participation of consumer organizations in policy-making is essential.

**2. The need for more information**

There are a number of current developments that increase the importance to consumers of having more information about food, food production and food ingredients:

**2.1 Internal market/Enlargement/Globalization**

As a result of the Single Market, progressive enlargement and globalization, food and food ingredients may come from more countries than before and travel through many more different

paths to the ultimate consumer. The fact that food is handled by an increasing number of players before it reaches the final consumer increases the opportunities for contamination unless there are strict controls. Furthermore, global markets also mean that we are at risk from food safety hazards from around the world. Problems may also arise in ensuring full compliance with Community norms for products originating from outside the Community, including some candidates for EU membership. With regard to the veterinary and phytosanitary aspects of the enlargement process, there is a low level of compliance with EU rules according to David Byrne, Commissioner of Consumer protection.

## 2.2 Eating habits

There are many changes in eating habits including a move towards greater convenience. Consumers are more often eating more processed more handled or more packaged food than before.

## 2.3 Changes in production

For many reasons, food production and processing are continually changing. In many cases production is becoming more intensive, and more industrialized, with higher inputs at production level such as pesticides or fertilizers.

## 2.4 Changes in distribution

Nowadays, even very small enterprises may supply ingredients for a very wide range of food products from different countries.

## 2.5 Changes in composition

Consumers are consuming a wider range of food, food ingredients and food additives than ever before.

## 2.6 Consumer sentiment

In Europe, consumer confidence in food safety is increasingly volatile. Environmental and other factors are becoming more important.

In a single market such as the EEA and the enlarged EU there are no internal border controls. Consumers need to feel confidence in the production, processing and regulatory regimes of other countries.

# 3. Risk and consumer confidence

I will now consider some of the factors that might help to inspire consumer confidence in risk assessment and risk management and also how best to communicate (and listen) to consumers in this process. A necessary but not sufficient condition is that consumers must have the right to be informed about, and to participate in, the making of public decision affecting them. Participation is essential to communication. Access to information is also essential, not only as to the content of decisions but also as to the processes and procedures by which decisions are reached. This must include access in good time to the arguments and documents submitted by all interest groups. This must be achieved before decisions are made, so that submissions by any one interest group may be subject to scrutiny and challenge in proper cases. Public hearings and other ways of testing different views against each other are also essential elements of the policy making process.

The European Commission is making efforts to improve consumer participation and access to information but still consults too often on a private basis separately with different interest groups. Proposals for the new European Food Safety Authority show an encouraging commitment to transparency but it is essential that all submissions to the authority should be publicly accessible.

(The same specific and general considerations of course should apply in relation to other bodies such as FAO/WHO and Codex Alimentarius).

Obviously it is impossible to involve each and every consumer in policy making. Which consumers and which consumer organizations should be involved? Questions of legitimacy and "representativity" can be raised and have to be handled in concrete terms depending on the circumstances of the case, but again the key element is the degree of openness of the decision-making process generally.

Membership on advisory committees for this or that consumer organization is not sufficient in itself. Participation in such committees is essential but may not confer much influence. We must look at the totality of the policy-forming and decision-making process. The process of consultation and policy-making must itself be so open and transparent as to allow many different individuals and groups representing different interests to contribute if they so wish.

Above all, it is essential to avoid any implicit or explicit assumption that food policy is largely a matter for officials and experts (and industry). Consumers have a complex relationship with their food and will not simply accept that someone else knows best.

Again, the totality of the policy making process may have an important influence on crisis management, an issue that has assumed greater importance in recent years. Of course it is good to improve crisis management but the ability to manage crises will depend crucially on what is done before, rather than after the crisis arises.

#### **4. The role of science**

The decision-making process must be based on good science (what else?) but that is not enough. Consumers do not have a great deal of faith in scientists in this domain. According to a recent Eurobarometer<sup>23</sup> Poll, consumer trust in scientists is somewhat ambivalent. Of those polled, 42.8% agreed and 42.3% disagreed with the proposition that "scientists are responsible for the misuse of their discoveries by other people".

Although the two overlap and are inter-related, a distinction is rightly made between risk assessment and risk management. Management is seen as a political or policy issue and assessment as more of a scientific question. Risk assessment should be based on (good) science but not only on

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<sup>23</sup> » [http://europa.eu.int/comm/dg10/epo/eb/eb55/eb552\\_sctech\\_key\\_en.pdf](http://europa.eu.int/comm/dg10/epo/eb/eb55/eb552_sctech_key_en.pdf)

science; it is not a matter that can be left exclusively to scientists. Here too consumers and their representatives must be involved.

Should consumer representatives sit as a matter of right on scientific advisory committees? The experience in the UK is positive but elsewhere practices are different. However, for any risk assessment process, consumer organizations will want at least to know the following:

1. How was the problem framed?
2. What factors were taken into account in the assessment?
3. How was the assessment process managed?
4. How were uncertainties identified, measured or treated?
5. How did internal discussions proceed in the assessing body?
6. Who are the members of the assessing body, how were they appointed, what is their background?

Points 1 and 2 above are particularly relevant; we must look for ways for consumer organizations and others to participate in discussions on these points, and also in the process of selecting members for scientific committees.

## **5. A better understanding of science**

If scientific advice and opinion is to be communicated to consumers and consumer organizations, we need a better understanding between scientists and consumers. With the support of the European Commission, BEUC the European Consumer Organization is launching a consensus project that will include a series of structural dialogues between consumer experts, scientists and other interest groups. We hope to increase mutual understanding and also to identify (and to expand?) those issues on which a broad consensus exists.

## **6. Marketing claims**

In communicating with consumers about food, food labeling, packaging and advertising plays a critical role. The changes in food composition and distribution, and changing consumer attitudes and habits mentioned above all mean that labeling is becoming more important.

Clearly labels should never mislead but they should also provide clear intelligible information about, inter alia, such matters as quantity, composition, nutrition, instructions for conservation and use, allergens, and novel products/processes (especially genetic modification). While the primary source of information for the consumer should be by way of product labeling, there are now new possibilities of using web-sites and other technological means as a source of supplementary information.

Consumers' perceptions are shaped not only by labeling but also by marketing claims. These claims appear to be proliferating and there is strong pressure to permit more use of them (e.g. functional and nutritional claims, claims for fortified food and food supplements etc). While attempts are made to ensure that individual claims are not misleading, we know very little about the cumulative effect of marketing claims generally on consumers' perception and understanding of food and food issues. As a matter of speculation, they may cumulatively have a "dis-educational" effect and I would recommend further study of the matter. END

## 7. Recommendations

- 7.1 Consumer confidence in food quality and safety can only be achieved by a comprehensive and integrated approach to food policy that includes, inter alia, the following elements:
- Representation of all stakeholders with particular emphasis on consumers, not only officials, scientists, decision-makers and industry representatives.
  - Specific open consultation with the public at large and their representative consumer organizations
  - Inclusion of "other legitimate factors" such as ethical and religious concerns, the desire to promote more sustainable food production practices, and many other things that policy making
  - Interactive dialogue with scientists, risk managers, consumers and consumer organizations, to promote better mutual understanding and better risk communication
  - An increase in the public understanding of science through initiatives to communicate
  - Full transparency in scientific advice and in the decision making process.
  - Effective two-way communication with consumers and their organizations on an ongoing basis (and not only when problems arise).
- 7.2 Scientific advisory committees, their decision-making processes and outcomes must be of the highest integrity: their procedures must be open, transparent and accountable, to consumers and the organizations that represent them, particularly on:
- the selection and appointment of members
  - procedures and working practices
  - framing the question to address and the factors to be taken into account in the decision-making process.

*Question for Discussion: Should scientific advisory committees include consumer representatives, perhaps in the form of experts nominated by consumer organizations or as public interest / consumer / lay-members of such committees?*

- 7.3 Governments should support the development of strong independent consumer organizations as an essential element in public discourse and an essential voice (among others) in the decision-making process.
- 7.4 Submissions on policy issues to public bodies should always be published promptly when they are received and above all in time to allow other interests to comment on them.

- 7.5 The overall contribution of commercial claims to consumers' understanding and misunderstanding of food issues needs urgent examination by the appropriate bodies.

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Independent consumer organizations are essential elements in the process of communicating with consumers about food and food risks. This process of communication has become more important in recent years because of changes in food production, composition, distribution, processing and origins, combined also with changes in consumer habits and attitudes. The effectiveness of interactive communication about risk assessment and management will depend on the overall openness and transparency of the assessment, decision-making and scientific process. Efforts are also needed to increase understanding between consumers and scientists. Communication with consumers carries on against a background of marketing claims; more study is needed on the overall cumulative effect of such claims on consumers' understanding and mis-understanding of food issues.

**WORKING DOCUMENT****DRAFT SYNOPSIS OF RECOMMENDATIONS**

Prepared by  
the Pan-European Conference Secretariat

**A. INTRODUCTION**Background

At the Preparatory Meeting on 4 May 2001 it was decided that the Pan-European Conference should supply a Final Report including recommendations for problems and concerns identified as being specific to the European region. The Conference should also indicate what follow-up activities are to be initiated to strengthen the food safety and quality situation in the European region.

It was agreed in order to facilitate the Conference progress that the Secretariat would analyze the proposed recommendations of individual conference papers and prepare a draft Synopsis.

Aims and use of the draft Synopsis

The aim of this draft Synopsis is to provide an overview of the recommendations as proposed in the papers prepared for the Conference (see Annex 1 for a compilation of recommendations and discussion points raised in the Conference papers). It was prepared with a focus on issues that are important to the European region as a whole. The draft synopsis could be a tool to structure the discussions in the Work Groups. The draft Synopsis could be considered, discussed and reviewed by each Work Group which should formulate their own recommendations. The recommendations of each Work Group will be discussed and reviewed in plenary in order to supply the final recommendations of the Conference.

**B. CLUSTERS OF RECOMMENDATIONS**

This draft Synopsis provides four clusters of recommendations, these are:

- I. Identification of risk sources and scientific advice
- II. Regulation, control and enforcement
- III. Capacity building, education and networking
- IV. Information systems and risk communication

All the recommendations are numbered. At the end of each recommendation you will find, in brackets, the numbers of the original recommendations from the Conference papers as they appear in Annex 1. Recommendations suggested by the Conference Secretariat are numbered with a CS-number.



It should be noted that, while some of the recommendations drawn from the Conference papers have been slightly edited to make them fit into the draft Synopsis, no recommendation has been drafted in the standard format used for recommendations. Instead they are all drafted with a view to focus on the **substance** of the points to be addressed by the Conference Work Groups, leaving to the Conference the decision on the final form the recommendation should take, in particular with respect to scope, whether addressed to only Governments or all stakeholders, and to the importance the Conference wishes to attach to the proposed recommendations.

Within the four clusters a distinction has been made between **policy** recommendations and recommendations with an **operational** character: the former focuses on basic principles that could be adopted, the latter on the specific measures that are necessary for implementation of the principles.

## **I. IDENTIFICATION OF RISK SOURCES AND SCIENTIFIC ADVICE**

### **Policy recommendations**

1. Regional and national networks need be established and/or improved for the collection, compilation and sharing of information and data on aspects of food quality and safety, food risks and contamination and foodborne diseases to improve comparability and equivalence of policies and to support harmonization.
2. Collaboration is required to strengthen and harmonize integrated and transparent systems for surveillance, outbreak investigation, reporting systems and diagnostic methods on food safety and quality.
3. Enhanced cooperation between the sectors of health and food production and agriculture is necessary for food safety surveillance and monitoring.

### **Operational recommendations**

4. The quantity, quality and frequency of data reporting at national level and to the WHO Surveillance Programme for Control of Foodborne Diseases in Europe need to be improved.
5. Food microbiology data for risk assessment need to be collected to assist the Joint FAO/WHO expert consultation on risk assessment of microbiological hazards in food (JEMRA); the outcome of such international risk assessments, as well as the methodology used for these, should be used also at national level.
6. National capacities to perform risk assessments of chemicals in food supply should be strengthened by unbiased monitoring and other studies to determine levels and trends of chemicals in food.

7. Consideration should be given to harmonization across the Region, of data reporting formats for chemical contaminants in food as the first step in developing consistent and comparable assessments for both health and standards-setting purposes, e.g. Codex Alimentarius. In this regard, the GEMS/Food data structure should be considered as the default if no other format is available.

8. Total diet studies should be conducted at national level, to assess dietary and other exposures to toxic chemicals by the overall population as well as vulnerable groups such as children; the consumption part of such studies are expected to provide valuable information and will also be useful in microbiological risk assessment; in cases of localized contamination, duplicate diet studies need to be conducted to assess possible exposure to unacceptable levels of toxic chemicals in food.

9. Decision-making processes and outcomes of scientific advisory committees must be of the highest integrity: their procedures must be open, transparent and accountable, to consumers and the organizations that represent them, particularly on: the selection and appointment of members, procedures and working practices, framing the question to address and the factors to be taken into account in the decision-making process.

## **II. REGULATION, CONTROL AND ENFORCEMENT**

### **Policy recommendations**

10. As improvements of public health and international trade of food products are often hindered by discrepancies of food safety and quality policies across the Region, there is a need to increase the comparability of food safety and quality systems by implementing equivalence, transparency and harmonization of regulations and control across the Region.

11. An integrated and multidisciplinary policy approach to food safety and quality should be applied with participation of all governmental and non-governmental stakeholders in the food chain, including animal feed, agriculture and food industry sectors and consumers organizations.

12. Regulation and control systems for prevention of food-borne disease, reduction of food safety risks and protection of the environment should be developed.

13. In policy making, consideration should be given to "other legitimate factors" that are of concern to consumers and that may affect consumers' health indirectly, such as ethical and religious concerns, the desire to promote more sustainable food production practices.

### **Operational recommendations**

14. Endorsement should be given to the work of Codex Alimentarius as the generic instrument to promote harmonization of food safety and quality standards in the entire European region, and recommends that members increase their participation in Codex Alimentarius.

15. Food safety strategies should be risk-based, giving priority to targets and measures that have the potential to result in the greatest reductions in food-related diseases.
16. Coordination and cooperation of official control services should be established and/or enhanced at national and regional level.
17. Better control of food safety and quality in food industry should be introduced, with due consideration to internal checks considered effective by public inspectors.

### **III. CAPACITY BUILDING, EDUCATION AND NETWORKING**

#### **Policy recommendations**

18. In view of the major differences in food safety and quality policies, in their application and control across the region, along with potential differences in both the level of protection of consumers' health and barriers to trade, as well as differences in the efficiency and operational costs of applied policies, intra-regional cooperation needs to be expanded in the field of capacity building, education and research.
19. European policy-makers and research institutes should strengthen their cooperation in science and development and expand scientific networks to ensure the efficient delivery of safe quality food and the effective operation of competitive markets throughout the European region.
20. Since multilateral and bilateral co-operation in the field of research, capacity building and education needs a secure financial basis to safeguard and promote continuous development and improvement in food quality and safety throughout the Region, Member governments and international organizations should consider investment and financial support for regional cooperation in this field.
21. As FAO and WHO may be considered to have a comparative advantage in facilitating the establishment of regional networks, FAO and WHO should be encouraged to jointly develop programs to facilitate and coordinate the establishment and strengthening of research and policy networks on food safety and quality across the European region.

#### **Operational recommendations**

22. Cooperation initiatives for capacity building and education should be based on international standards and scientific research.
23. Regional networks of national risk assessment bodies should be established.
24. Education and training about food hygiene, throughout the food chain (including catering personnel and consumers) should be improved.

25. Capacity building programmes based on innovative approaches in education and food production need to be established at all levels, graduate, post-graduate, executive or distant learning education.

26. In view of the importance of European cooperation in food safety and quality research to cope with complex cross-border food safety and quality issues and to support policy improvement and harmonization, a pan-European science and research network should be set up to support and facilitate the process of policy development and to strengthen food safety and quality knowledge across the region.

#### **IV. INFORMATION SYSTEMS AND RISK COMMUNICATION**

##### **Policy recommendations**

27. Observing that the quality of information and communication systems determine confidence of consumers in food products and are effective tools to solve and avoid food safety and quality emergencies across the Region, food safety and quality information should be promoted and communication between all stakeholders, including consumers should be strengthened.

28. A comprehensive, transparent and integrated approach to food safety and quality policy by open consultation and debate is needed in order to increase confidence of consumers in food products.

29. Consumer education and information on food production and safety and quality control should be reinforced to contribute to higher confidence of consumers in food products.

30. As FAO and WHO are best placed to initiate regional programs on food safety and quality information and communication, FAO and WHO should be encouraged to jointly develop programs to facilitate and coordinate improvement of information and communication systems in the field of food safety and quality.

##### **Operational recommendations**

31. Communication at all levels between key stakeholders in the food chain is required with the objective of improving food producers' understanding of hazards, implementation of preventive systems such as HACCP and a better understanding of their contribution in reducing specific risks at particular points of the production chain.

32. Results of all official monitoring tests (pesticide residues, veterinary drug residues and other contaminants in food, feed and drinking water), official food inspections and other official food control activities, should be made public.

33. An Emerging Risk Identification System based on a systematic and integrated approach involving different disciplines should be established; such a System would improve information exchange between risk managers and risk assessors within a country or between different countries

based on the needs of users (risk managers and risk assessors). A European (or worldwide) Emerging Risk Identification System should enable provision and sharing of national validated (or non-validated) information on scientific research and/or exchange of scientific experts to review, and anticipate possible new or unknown food safety problems at an early stage.

34. The Rapid Alert System on Food Safety Emergencies, operational in the European Union has proved to be a useful instrument to support public health, consumer protection and international food trade. Central and East-European Member countries might wish to analyze it with a view to determine whether it is useful to participate in this food safety Rapid Alert System.

35. A Biosecurity Portal should be developed that meets the needs of users for the exchange of official biosecurity information, recognizing the potential benefits of providing and sharing national information in the Biosecurity Portal as a primary mechanism for the exchange of official food safety, animal and plant health information.

36. As a mechanism for interactive dialogue between scientists, risk managers, consumers and consumer organizations is known to contribute to better mutual understanding and risk communication, Members and Organizations involved in food production and trade should enhance transparency and pro-active communication with consumers in understanding scientific advice and in decision-making processes.

37. The development of strong independent consumer organizations should be promoted as an essential element in public discourse and an essential voice (among others) in the decision-making process.

38. Government reports and submissions on policy issues to public bodies should always be published promptly when they are received and above all in time to allow other interested stakeholders to comment on them.

39. Members and other parties involved in food production and trade should undertake examination of the overall contribution of commercial food safety and quality claims to consumers' understanding and misunderstanding.

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### **Conference Room Documents**

<b>CRD Reference</b>	<b>Title</b>	<b>Origin</b>
PEC/CRD 05	Developments of international agricultural trade in the European Region	FAO
PEC/CRD 06	FAO Veterinary Public Health and Food and Feed Safety Programme: the Safety of Animal Products from Farm to Fork	FAO
PEC/CRD 07	Advantages of implementing Codex Alimentarius standards for the Republic of Moldova	Moldova
PEC/CRD 08	Constraints in CEEC countries to Achieving International Laboratory Accreditation	Lithuania
PEC/CRD 09	Food Quality and Safety Activities in Albania	Albania
PEC/CRD 10	Experiences of the Slovak Republic in the FAO Project TCP/SLO/8921(A) "Strengthening Food Quality Control"	Slovak Republic
PEC/CRD 11	Experiences in application of HACCP systems in small and medium sized businesses in Hungary	Hungary
PEC/CRD 12	Development of Consumer Organizations in Europe	Consumers International
PEC/CRD 13	Refrigeration for Food Safety and Quality	International Institute of Refrigeration (IIR)
PEC/CRD 14	Coordination of public health, veterinary and consumer networks – Example of the "Listeria" Unit	France
PEC/CRD 15	The Situation of Food Safety and Quality in the Azerbaijan Republic	Azerbaijan Republic
PEC/CRD 16	Food Safety	Italy
PEC/CRD 17	WHO Surveillance Programme for Control of Foodborne Infections and Intoxications in Europe	FAO/WHO Collaborating Center for Research and Training in Food Hygiene and Zoonoses
PEC/CRD 18	General Principles of Food Law in the European Union	European Community
PEC/CRD 19	The European Food Safety Authority	European Community
PEC/CRD 20	Concept of the Virtual Food Safety Agency	FAO Sub-regional Office for Central and Eastern Europe

PEC/CRD 05  
(Original language)

## CONFERENCE ROOM DOCUMENT

### DEVELOPMENTS OF INTERNATIONAL AGRICULTURAL TRADE IN THE EUROPEAN REGION

PREPARED BY  
N. SCHELLING, FAO

#### Summary

*In the period from 1990 until 1999 the value of international agricultural trade in the world increased from 680 to 858 billion US\$. European international trade of agricultural products in that period increased from 346 to 428 billion US\$. Within the region the European Union has the lead in international trade of agricultural products. Countries of the European Union perform roughly 86 percent of imports and almost 89 percent of exports of agricultural products of the European region.*

*Most countries in the region are net-importers of agricultural products. Only 12 out of 45 European countries have an agricultural trade surplus. Net-exporters are found all over the region, but main exporters are located in the European Union.*

*Adequate food safety and quality control is an important condition for successful food trade. Large differences in economical development across the region lead to a diverse picture of trade performance and food supply.*

#### 1. Introduction

This Conference Room Document has been prepared by FAO for the Pan-European Conference on Food Safety and Quality, to be convened in Budapest from 25 - 28 February 2002. As members from the European regions of both FAO and WHO have been invited, the international trade of almost all 45 countries of that region has been taken into consideration from available data.

This document is intended to inform the participants of this Conference about the state of affairs of international trade of agricultural products, performed by the countries of the European region. No distinction has been made between food and non-food products, raw materials or processed products. Food and animal feed products form the most important part of these figures. Wood and wood products are not included.

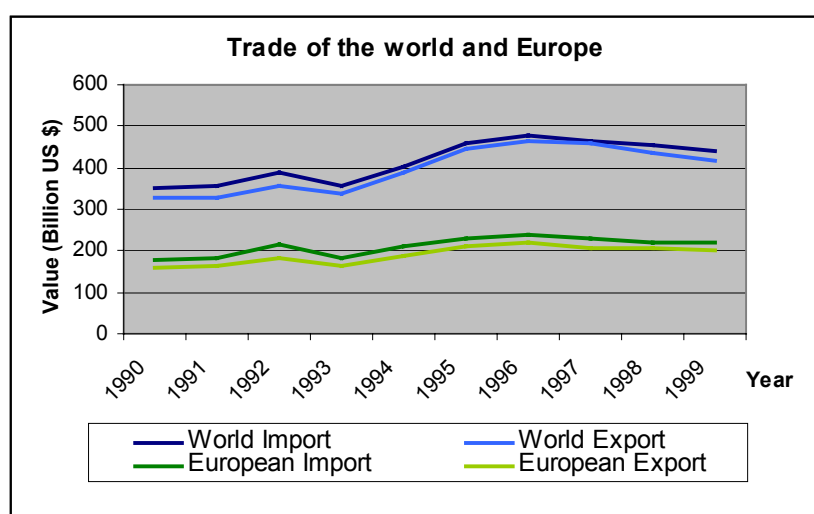
The countries of the European region of FAO and WHO cover almost 50 percent of all international food trade both import and export. Food safety and quality issues strongly influence international food trade and market possibilities of food products. Therefore measures to strengthen and harmonize food safety and quality may also improve marketing potentials and stimulate trade. On the other hand harmonization may also cause higher costs requiring external technical assistance. If

product requirements are beyond legitimate concerns, such as human health, it may become difficult for certain countries to participate in international trade. If performed in a proper way higher safety and quality levels of food will enhance protection of consumers and improve standards of living. These may be important objectives for development of the FAO/WHO Member countries.

## 2. Development of international agricultural trade between 1990 and 1999

In the past decade the world international agricultural exports increased from 326 to 417 billion US\$. In the same period imports rose from 326 to 417 billion US\$ (see figure 1).

**Figure 1. Developments of international agricultural trade 1990 - 1999**



In the first 6 years of the nineties international agricultural trade increased by 6 percent per year until agricultural export value reached its highest level of 466 billion US\$ in 1996 and import of 479 billion US\$. After 1996 both im- and exports dropped gradually with 2 percent per year to the trade levels of 1999.

The European region as a whole followed more or less the same pattern whereas intra-EU trade covers 70 percent of all international trade of the region. Agricultural exports rose from 163 billion US\$ in 1990 to 225 billion in 1996. After that it dropped to 206 billion dollars in 1999. Imports grew from 182 billion US\$ to 244 in 1996 and then fell to the 1999 level of 222 billion dollars. The differences in international agricultural trade performance between the European Union and the countries in Central and Eastern Europe are substantial and strongly influenced by the socio-economic changes in the past decade.

## 3. The European region

Agricultural im- and exports of the European countries represent roughly 50 percent of the worlds' international agricultural trade (see figure 2). This figure is based on external trade of individual countries. When the European Union as a whole is considered, the figures are different. Exports in



1999 of the individual EU countries had a total value of 185 billion US\$ whereas export value of products from the Union as a whole to countries outside the Union was US\$ 51 billion. Almost 70 percent of agricultural export value of the EU-countries are covered by internal EU-trade. For imports in 1999 the figures are US\$ 188 billion accumulated by the member countries and US\$ 55 billion by the EU as a whole. Of those imports roughly 70 percent is based on internal EU trade.

**Figure 2. International agricultural trade in 1996 and 1999 in US\$ x 1 mln.**

Region	Export 1996	Export 1999	Import 1996	Import 1999
World	465,699	417,310	478,923	441,443
Europe, including internal trade	224,812	205,520	243,874	222,375
European Union including internal trade	199,093	184,707	202,013	187,901
European Union excluding internal trade	56,928	51,217	64,179	55,236
Europe, Non-European Union	25,719	21,014	41,859	34,474
Transition markets (27 countries)	19,556	15,161	30,737	24,536

Source: FAOSTat, November 2001

Outside the European Union and especially in the transition markets, both exports and imports dropped considerably between 1996 and 1999. High import rates of some countries at the beginning of the nineties decreased by higher domestic agricultural production or economical decline by the end of the decade. A limited number of Central and Eastern European countries developed exports in that period.

The total agricultural trade deficit of the European Region as a whole is 9 percent, mainly due to a negative trade balance in many Central and East European countries. The agricultural trade balance of the European Union is just slightly negative. Increase of agricultural exports might be an important tool for the socio-economic development of some transition countries, where a large part of the active population is working in agriculture.

On the level of individual countries, most of the 45 countries are net importers. Only 12 European countries are net exporters. Germany is the most significant importer of agricultural products in Europe, followed by the United Kingdom. The most important exporting countries in the European Union are France, the Netherlands and Germany. Outside the European Union main food products exporting countries in the region are Turkey, Poland and Hungary.

## International trade in millions of US\$ of individual countries of the FAO/WHO European regions

Source: FAOStat, 2001

EU countries	Import 96	Import 99	Export 96	Export 99	non-EU countries	Import 96	Import 99
<b>Austria</b>	4316	4690	2631	3429	<b>Albania</b>	318	
<b>Belgium-Luxemburg</b>	17032	16238	18817	17717	<b>Armenia</b>	312	
<b>Denmark</b>	4427	4534	10411	9073	<b>Azerbaijan</b>	384	
<b>Finland</b>	2149	2060	1546	969	<b>Belarus</b>	945	
<b>France</b>	27619	25239	40402	36812	<b>Bosnia Herzegovina</b>	536	
<b>Germany</b>	44763	37224	26457	23777	<b>Bulgaria</b>	428	
<b>Greece</b>	3867	3605	3657	3015	<b>Croatia</b>	898	
<b>Ireland</b>	3016	3416	7323	6577	<b>Cyprus</b>	993	
<b>Italy</b>	25569	22013	16889	15921	<b>Czech</b>	2202	1
<b>Portugal</b>	4315	4177	1487	1451	<b>Estonia</b>	697	
<b>Spain</b>	13159	11857	14964	14032	<b>Georgia</b>	251	
<b>Sweden</b>	4312	4279	1822	1810	<b>Hungary</b>	966	
<b>The Netherlands</b>	20786	20118	37285	34387	<b>Iceland</b>	181	
<b>United Kingdom</b>	26680	28445	15398	15730	<b>Israel</b>	2028	1
					<b>Kazakhstan</b>	484	
					<b>Kyrgyzstan</b>	183	
					<b>Latvia</b>	299	
					<b>Lithuania</b>	595	
					<b>Malta</b>	287	
					<b>Macedonia</b>	277	
					<b>FYR Moldova</b>	116	
					<b>Norway</b>	2010	1
					<b>Poland</b>	4056	3
					<b>Romania</b>	940	
					<b>Russian Fed.</b>	10935	7
					<b>Slovakia</b>	844	
					<b>Slovenia</b>	831	
					<b>Switzerland</b>	5461	4
					<b>Tajikistan</b>	169	
					<b>Turkey</b>	4008	2
					<b>Turkmenistan</b>	266	
					<b>Ukraine</b>	1342	
					<b>Uzbekistan</b>	169	
					<b>Yugoslavia</b>	570	

More information about trade statistics can be found at the FAO web site:

<http://apps.fao.org/page/collections>

PEC/CRD 06  
(Original language)**CONFERENCE ROOM DOCUMENT****FAO VETERINARY PUBLIC HEALTH AND FOOD AND FEED SAFETY PROGRAMME:  
THE SAFETY OF ANIMAL PRODUCTS FROM FARM TO FORK*****Background***

The livestock sector plays an essential role in agricultural and economic development as well as in food security. Public concern about the safety of foods of animal origin has recently heightened due to problems that have arisen with outbreaks of food-borne infections (BSE, *E.coli*, *Salmonella*, *Campylobacter*, *Listeria*, etc.) and chemical contamination (pesticides, heavy metals, dioxins), as well as due to growing concerns about veterinary drug residues and microbial resistance to antibiotics. These problems have drawn attention to the production practices within the livestock industry and have prompted health professionals and the food industry to closely scrutinise quality and safety problems that can arise in foods of animal origin. In addition to national food safety, these issues have serious implications for international trade in livestock products and animal feed.

***Programme Rationale***

The FAO-AGA<sup>24</sup> Programme on Veterinary Public Health and Food and Feed Safety<sup>25</sup> focuses on the development and promotion of sustainable veterinary public health systems, structures and functions through the strengthening of relevant institutions including disease intelligence. Furthermore, it provides decision support for the selection of cost-effective control strategies for major zoonotic diseases and guidelines on prudent use of antimicrobials and quality control mechanisms for livestock products from stable to table. It also aims at preventing food-borne hazards in food of animal origin by developing science-based Risk Management and Good Practices for livestock production and the feed industry.

The programme generates risk assessment procedures for traditional and new public health challenges, and guidelines for risk management and precautionary measures. The FAO Feed and Food Safety Gateway<sup>26</sup> provides consolidated information from FAO and national and international organizations on various safety and quality issues in the whole food chain. It presents up-to-date information on news, press releases, legislation, events and special subjects of interest. A comprehensive range of publications, presentations, statistical data and details on technical assistance offered to member countries is also available at this site.

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<sup>24</sup> Animal Production and Health Division

<sup>25</sup> FAO Programme of work and budget 2002-2003: [http://www.fao.org/pwb/2002/index\\_en.htm](http://www.fao.org/pwb/2002/index_en.htm)

<sup>26</sup> <http://www.fao.org/livestock/AGAP/FRG/FEEDSAFETY/feedsafety.HTM>

***FAO Country Programmes for Capacity Building for Surveillance and Prevention of BSE and Other Zoonoses in Central and Eastern Europe***

The Geographic BSE-risk (GBR) assessment as prepared by the Scientific Steering Committee advising the European Commission reveals that it is likely that BSE is present in the cattle herds of most Central and Eastern European Countries (CEECs) (GBR level III) even if in most of the countries BSE is not yet confirmed.

FAO has suggested that countries at risk should take the necessary precautions and implement active, as well as passive, surveillance for BSE in cattle and control measures in the animal feed and meat industries. Issues that call for attention include the production of animal feed, slaughtering methods, the rendering industry and the disposal of waste materials. Legislation to control the feed and meat industry and its effective implementation is required, as well as capacity building of government officials, private veterinarians and workers in the specialized industry sectors, information campaigns for farmers and communication strategies for all stakeholders.

Conducting risk analyses may be difficult for some CEECs. The process is technically complex and expensive. Therefore, support is required by international donors and agencies with the necessary expertise and resources. Collaboration is called for between countries with good facilities and experience in surveillance and prevention and those needing to improve their risk management system.

For this reason, the FAO Animal Production and Health Division has developed a project framework to provide decision support on legislation and technical aspects, as well as capacity building of government officials and other concerned personnel. This framework addresses comprehensively the technical assistance required to ensure BSE risk management; moreover, it ensures that countries meet the required international standards for export and have the necessary mechanisms in place to prevent the importation of hazards.

***Competence Centres for Zoonotic Diseases***

Rational management of health risks requires basic epidemiological information on the true extent of the problems, on the economic and socio-cultural risk factors and on the costs and benefits of alternative management strategies. So far, the risk management and research results are in many countries dispersed, lack comparability and usually only consider isolated aspects of the complex problem.

In an effort to harmonize research and risk management activities at national and regional level, FAO proposes to co-ordinate a concerted research and development programme through selected Competence Centres. The programme aims at promoting human resources, scientific research and information on quality and safety of animal products, with particular reference to the epidemiology of BSE and other zoonotic diseases. With FAO support, research and development programmes will be implemented by existing veterinary and food institutes in the areas of livestock production systems, animal nutrition and alternative feed resources, animal feed quality and safety, meat science, veterinary preventative medicine and epidemiology, bioinformatics and information.

***FAO Programme for the Implementation of Safe Animal Feeding Standards and Good Production Practices for the Livestock Industry in Central and Eastern European countries.***

The FAO Animal Production and Health Division has developed a programme which sets out to ensure good feed management and avoid disease, drug and chemical contamination, which could be hazardous to human and animal health.

Ensuring the production and utilization of safe feedingstuffs requires an integrated approach which takes into account upgrading the legislative framework and the mechanisms of effective implementation, training of officials, inspectors and workers in the feed industry sector, and communication campaigns for farmers. In addition to the need to prepare and agree on standards for safety in the feed industry, the objective is also to design and operate an effective and sustainable programme for the effective implementation of such standards. Existing decrees and regulations need to be further developed, international methods and standards introduced and a working system put into place with long-term sustainability. This is particularly complex in countries in transition with a majority of the population living in rural areas and with many small-scale producers supplying the market.

***Centres for Quality and Safety of Livestock Products (the FAO-Industry Partnership Project)***

The FAO Animal Production and Health Division considers that close partnership with industry is necessary to improve the safety and quality of animal food products throughout the food chain. Through partnership and participation, objective and science-based advice can be given to industries and other stakeholders to develop Good Agricultural Practices and Good Manufacturing Practices that will protect human health, animal health and the environment. The project focuses on providing capacity building, high quality technical information and support as an essential part of the process of elaborating codes of practice for the industry and the farmers. This will ensure that eventual regulations and guidelines are practicable and widely supported.

***Conclusions***

FAO has suggested that countries should closely monitor food quality and safety problems that can arise in foods of animal origin as a result of animal feeding systems.

Countries at risk should take the necessary precautions and implement active, as well as passive, surveillance for BSE in cattle and control measures on the animal feed and meat industries.

FAO considers that close partnership with industry is necessary to improve the safety and quality of animal food products throughout the food chain.

FAO's mandate for normative work on food and feed safety, extensive expertise in the sector at field level and its long established relationship with Central and Eastern European governments and institutions, enable FAO to successfully co-ordinate collaborative efforts to develop and harmonize risk management strategies.

**CONFERENCE ROOM DOCUMENT****ADVANTAGES OF IMPLEMENTING CODEX ALIMENTARIUS  
STANDARDS FOR THE REPUBLIC OF MOLDOVA  
NICOLAE I. OPOPOL, PRESIDENT****Republic of Moldova National Codex Committee**

The strategic task in the field of agriculture production, which faced the Republic of Moldova (RM) after gaining its independence, was to provide for the safety and high quality of food products. It was recognized that addressing this problem could serve to promote its goods on world markets. In spite of appearing simple, implementation of this task turned out to be a difficult task as the country had no experience in this type of activity and it had not sought the experienced help of international organizations. Earlier collaboration with the World Health Organization of the United Nations (WHO) had dealt primarily with the organization of health care. Information was not available on the international organizations interested in addressing problems of nutrition, food quality and food safety, as well as problems of food caused diseases on the whole.

The initial information on available experience in this sphere was received from FAO. We realized that reaching sound solutions on all-important problems in the field of nutrition, including food quality and safety would only be possible in close collaboration with the world community.

Privatization, which took deep root in RM, resulted in liquidation of large collective state-farms, food processing complexes, dairy herds, pig-farms, etc. These were mainly restructured and their property, such as land and animals, was distributed to the general population. Producers have experienced a sharp decline in production and loss of markets similar to other countries in transition. In order to promote international trade, the Moldova Government began the process of harmonizing national standards with more stringent EU international requirements related to WTO requirements. In their turn, food producers had to meet international and EU trade demands on food quality. This has been a very difficult task since most of the producers face many problems, including:

- the high-cost of modernization of outdated equipment;
- an uncertain and still dwindling supply of raw materials;
- lack of experience in marketing; and,
- limited knowledge of foreign market requirements on quality, particularly, HACCP implementation.

RM inherited its entire legislative, regulative and methodological base from the Soviet Union as well as the state system of food safety and food quality control, including all political aspects of this activity. At present, the state system covering the entire food chain from raw materials to the consumer, including import/export operations, is carried out by five Ministries and Departments:

Ministry of Agriculture and Food Industry (MOAFI), Ministry of Health (MOH), Department of Standardization and Metrology (DOSM), pre-shipment inspection, and the National Plant Quarantine Service.

All of the above agencies maintain their own inspection and laboratory networks at central and local levels, which often leads to overlap and duplication of control activities. The agencies are paying attention mainly to the processing and distribution sections of the food chain and some forms of in-plant control are applied to finished products. The concept of producers having responsibility for food quality and safety has only made its first steps both in industry and among official control authorities. At present, there are not enough applications of the internationally accepted pro-active production line procedures such as Good Manufacturing Practices, Good Hygienic Practices, and Quality Assurance Systems.

The rights and interests of consumers have been established in a law enacted by the State Department of Standardisation and Metrology. However, due to the lack of related non-government organisations, they are unable to properly (effectively raise independent initiatives or to become involved in regulatory and control activities.

All of these problems, along with the necessity to integrate into the world community, induced the government of RM in 1997 to begin negotiations with the Codex Alimentarius Commission for membership. In 1999 these negotiations were successfully completed. The next step, after a period of preparation, was for RM to enter the WTO in 2001.

In 1999, based on the proposal of two ministries (MOH and MOAFI), the National Codex Committee (NCC) was created as the main consultative organ of the Government to standardise requirements on food safety and food quality and to harmonise them with international requirements as well as to promote healthy nutrition principles. The NCC established 11 working groups whose membership included leading national specialists and experts. Among the working groups are those related to general subject Codex Committees (General Principles, Food Additives and Contaminants, Pesticides Residues, Methods of Analysis and Sampling, Nutrition and Food for Special Uses) and to Codex commodity committees (Meat Hygiene, Milk and Milk Products, Cereals, Pulses and Legumes, Sugars, Fats and Oils, etc.).

Since the moment of its creation, NCC has become a real organ for developing the policy of introducing Codex recommendations into practice. The main strategic objectives of NCC activities are:

- development of measures to implement the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) and the Agreement on Technical Barriers to Trade (TBT Agreement), as well as decisions related to WTO Notification Procedures.
- harmonization of the national norms and regulations on food quality and safety with Codex recommendations.

On the whole, improving the food safety and quality system requires a well-coordinated and integrated set of actions. The Moldavian experience has shown that capacity building and technical assistance needs include at least the following items:

**Basic infrastructure** – setting up, equipping and maintaining food control services, administration and laboratories.

**National food control strategy** - a multi-disciplinary activity involving a number of government agencies as well as the food industry, consumers and academic/research institutions. This activity requires:

- *close collaboration* among all the participants, with clearly defined responsibilities for each, in order to make effective use of available resources;
- *clear objectives* with a well designed plan and operational responsibilities defined for all components of the system;
- *a monitoring provision* to enable the evaluation of the effectiveness of the food control strategy on a continuing basis so that adjustments can be made as necessary.

**Food legislation** - the establishment of food laws and regulations as the first necessary step in establishing an effective food control system. This work takes into account the obligations of countries under the WTO, SPS and TBT Agreements. Attempts should also be made to base food safety and quality requirements on standards, guidelines and recommendations adopted by Codex Alimentarius. Legislation should be flexible enough to allow it to deal with developments in technology, emerging hazards, changing consumer demands and new requirements for trade.

**Food inspection services** - well planned food inspection programs with a sound understanding of their duties and responsibilities and close collaboration with other food control services. This requires adequate management, training and equipment.

**Collaboration and cooperation of control agencies** - all agencies should be involved in food safety and quality work in an integrated and coordinated manner to ensure the adequate control of all aspects of food safety and quality throughout the food chain and to maximize the effective use of limited resources.

**Food control laboratories** - a sufficient number of adequately equipped laboratories and trained analysts using acceptable analytical methodologies to support the monitoring, compliance and enforcement activities of the food inspection services. The overall quality of the work of the laboratories is addressed by implementation of an analytical quality assurance system meeting international standards.

**Scientific and technical expertise** - the assessment of risk and food safety measures management should be based on priorities both from a human and economic perspective. The food industry bears responsibility for meeting all food quality and safety regulations and all segments of the food chain have responsibility for establishing food safety and quality controls. The food industry should be trained on the application of good agricultural, hygienic and manufacturing practices and the use of the HACCP System.

**Participation in the work of international organizations** - in order to contribute to and benefit from the work of international organizations such as Codex Alimentarius Commission, every



country must strengthen its ability to participate effectively in these organizations. This is accomplished by establishing National Codex Committees that enable countries to prepare national positions related to Codex work.

**Communication and exchange of information** - the establishment of clear lines of communication between interested agencies to provide for a regular exchange of information related to technical assistance activities. *These communications may be carried out in the following manner through:*

- the regular meetings of involved agencies;
- the inventory of technical assistance needed;
- the inventory of technical assistance provided;
- the roster of experts in various subject areas;
- the compilation of resource or reference materials;
- information on training, workshops, seminars, etc.

At the same time, development of a many-sided activity recommended by CAC requires a lot of efforts, including the material ones. Answering this problem in the Republic of Moldova was facilitated by FAO, which in 2000, at the request of the Government, realized the project “*Strengthening the Organization of a National Codex Committee*”. The project assessed the country’s food control system and indicated ways for a rapid change of the situation. In the framework of the project many methodical and organizational questions were solved. International experts visited RM from Bulgaria, Slovenia, Norway and from the Codex Committees directly. NCC activity was also strengthened by the at-site study of other countries (Norway and Denmark) that contributed their experience in this field.

One of the most important principles to consider in establishing a national Codex Committee activity is its complex character. In our opinion, the activity should include advancing a legislative base and creating a normative base working with policy-makers at all levels as well as with food producers and consumers, etc. Among these tasks the legislative base is considered fundamental to promoting and stimulating the activities of different Ministries, Departments, public organizations and private persons to provide for food safety and high food quality. In this direction the Parliament of RM has approved additionally the Certification Act (1999) and Standardization Act (2000). The Food Act is currently being developed and the Act on Sanitary-Epidemiological Protection of Population of 1993 is being updated.

As a result, the comprehension in RM of the importance and significance of international recommendations formulated by Codex has changed radically. The factors that promoted this situation are the following:

- Bringing the strategy, tactic and concrete Codex recommendations to the notice of all stakeholders related to the food chain, namely, the import-export inspecting bodies, the education system addressing these problems (universities and colleges); policy-makers at different levels, and the mass-media;
- Creating the national structures, with development of relative legislative acts, promoting coordination of the activities of all economic agents on the problem of food safety and food quality;

- Establishment of the State Commission as a national inter-departmental organ for the coordination of measures aimed at the security of the sanitary-epidemiological welfare of the population, including food safety;
- Creating the National Information and Notification Center for the presentation of information to countries and international and public organizations on all enacted, newly adopted or updated legislative documents which regulate food imports and food exports; and creation of a database with information on this subject;
- Translation and publication of Codex Standards and Recommendations in the state language as well as bringing them to the notice of all stakeholders;
- Information for the public through mass media (TV, radio, press) on the role of Codex Alimentarius and the significance for the national economy, etc.

Meanwhile, overcoming conflicting departmental interests is continuing to be a serious problem in solving some questions of addressing a sound food import-export inspection. This activity is, as before, distributed among several departments without well-defined functions for each. As a result, there are excessive bureaucratic difficulties along with the elements of duplicated functions that result in increased inspection costs. Due to the recognition of this actual problem, the government is studying the possibility to create the only one state system for conducting import-export inspection.

Many important measures are at the final stage of implementation or realization. Among them one can name:

- carrying out the revision of schedules for the relative departments of the Technical, Medical, Agricultural and Cooperative universities and colleges;
- studying the capacity for creation of a single centre for specialization and advanced training of all specialists in the field of laboratory control and import-export inspection;
- strengthening the work on involving consumers, producers, public organizations and mass media into addressing the problems of food safety and food quality.

As a result of the above strategies and actions in the Republic of Moldova, the outlooks are changed on a great many food quality and food safety problems that were unknown or only partly known before. This is expressed in the following:

- The high-level officials responsible for planning and organization of the food industry, international trade, import-export inspection, etc. have begun to take into account the problem of food safety in government policy. As an example, the Governmental Decree of 27.11.2001 *“On strengthening the measures on consumer protection”* has approved a related plan of activity. As its main measure, the plan includes the development of the above-mentioned Food Act.
- Food producers began to realize the degree of their responsibility for the safety of their production and to take measures in this direction. Two examples: food enterprises are implementing ISO quality standards; the persons, responsible for the realization of inner control, and processing enterprises are mastering and implementing the HACCP system. Full

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realization of these measures at the leading enterprises of food industry will be completed in coming years.

- Many farms have expressed their desire to grow organically produced foods that would, after corresponding certification, be proposed for sale to consumers.
- Some shifts have taken place in international trade where the Republic of Moldova has a special interest. Moldavian food has become more and more known in many European and Asian countries. As a positive example, exports have increased in particular for wine, fruits, vine, fruit and legume juice, etc.

*From the viewpoint of implementing Codex standards in the new independent states, the experience of the Republic of Moldova may be very useful.*

**CONFERENCE ROOM DOCUMENT****CONSTRAINTS IN CEEC COUNTRIES TO ACHIEVING INTERNATIONAL LABORATORY  
ACCREDITATION  
(submitted by Lithuania)**

The Republic of Lithuania, in common with other countries of Central and Eastern Europe, is currently undergoing a transition period from a centrally planned economy to a market based system and is in the process of restructuring public sector institutions and revising former legislation. In 26 of the countries of Central and Eastern Europe and the Commonwealth of Independent States (CIS), this process is underway in a variety of stages and approaches, or has been completed. A wide range of reforms has been necessary in all sectors of the economy including agriculture and food production. Important legislative, institutional and administrative changes have been identified that must take place in a number of key sectors including the laboratories sector in order to facilitate the implementation of Agreements such as the European Free Trade Agreement and other EU requirements. In the case of the Republic of Lithuania, a Free Trade Agreement between the European Union (EU) and the Republic of Lithuania was signed in 1994, which later was changed by the Association (Europe) Agreement.

Public interest has increased significantly regarding the reliability and quality of test results performed by laboratories on food products during the last 20 years. Laboratory accreditation is considered by the public to be a demonstration of competence.

One of the exceptional traits of the post-socialist countries laboratory system was to have very strong external control and very strict requirements to follow the standards as defined by the state (government). For example, standards of the former Soviet Union included the phrase that nonobservance of the requirements of the standard was punishable by law. It was very important that each analysis method used in a laboratory be approved by a high-level government official (for example by a Minister) and at the same time the initiatives of the laboratories were restricted. The methods that had been expertly prepared and validated by the laboratories did not have legal authority until there was an official legal national document officially confirming the methods. External control of the laboratory had preference over any internal quality control system.

The inherited infrastructure of the state metrology system, which is totally different from metrology systems in use in EU countries, creates many problems. The basis of such a system is total legally obligatory official registration and verification of all laboratory and measurement equipment (i.e., gas chromatograph, pH-meter and other equipment), which laboratories in EU countries routinely calibrate themselves. This obligatory system creates problems in purchasing modern equipment made in Western countries due to the additional requirements for equipment and documents, which are not applied in Western countries. Due to the high level of official attention to legally obligatory verification the most important accreditation requirements, such as calibration of the equipment, use of certified reference materials, internal standards and other important quality measures, are not taken into consideration. Therefore, legally obligatory verification should be abandoned or should

be restricted to those instruments for which the measurement results are directly of crucial importance to trade, health, safety or environment.

A further constraint is encountered in creating a laboratory accreditation system which fulfils the requirements of EN 45003. Despite strong efforts in this direction among former Soviet Union republics, only the Lithuanian Accreditation Bureau has been accepted to the organization of European Accreditation.

In the educational system of many universities of post-communist countries, students are still receiving insufficient training on requirements for the most modern quality systems and other aspects of activities of accredited laboratories. This situation relates to the more demanding analytical requirements for food products that are being exported to EU markets and the training required for the operation of highly sophisticated new laboratory equipment. Due to this problem there is a shortage of specialists who are able to work as quality managers to implement quality systems and to accurately describe these actions and procedures in the Quality Manual and to prepare the laboratories for accreditation. During recent years another problem has appeared. Many well-educated young specialists are leaving for work in Western countries and it becomes problematic to find qualified young specialists who are able to prepare the laboratories for accreditation.

The most important factor is the human factor. It is very important that personnel have a full understanding of the essence and necessity of the accreditation and quality system. At the beginning, laboratory workers believed that only managers needed the added training and they questioned the necessity of the many extra tasks. This attitude was very difficult to change. An additional problem was to train staff to operate the new and sophisticated equipment. As most of the most sophisticated systems are computerized, this required additional training to improve computer skills, which proved a hardship for some staff members.

The decision of the laboratory to seek accreditation is determined largely by the financial resources allocated to the laboratory for upgrading equipment and facilities and for participation in international proficiency testing schemes and training of personnel. This is one of the most important factors related to why some regional laboratories are not presently seeking accreditation. While staff is fully willing and capable of being trained to meet accreditation requirements, the costs of the process are too great for many laboratories.

EU funds (Phare) have supported and helped very much in the implementation of the accreditation system and the actual accreditation of laboratories. Experts from EU countries have evaluated the Lithuanian accreditation scheme and they provided practical recommendations on how to change or improve activities in different fields. A PHARE project was carried out for the National Veterinary Laboratory of Lithuania by a team of German and Lithuanian experts, co-ordinated by the German company.

The goals of the project were:

- to supply proposals for the compliance of Lithuanian food legislation with EU requirements;
- to upgrade a national state controlled food and feeding stuffs laboratory;
- to assist with accreditation for the laboratory in accordance with EN 45001.

The overall budget of the accreditation project amounted to 2 Million Euro. One and one-half million Euro have been allotted for the acquisition of modern equipment and training of the staff in

institutes and laboratories of EU countries. From the budget of the Lithuanian Government nearly 800 000 Euro were allocated for renovation of the laboratory. At present the equipment has been delivered, with most apparatus coming from EU countries. Members of the staff of the laboratory have undergone practical training in different institutes, training centres and laboratories in EU countries and the laboratory has been accredited by the German accreditation body, DAP, according to the requirements of EN 45001. Only with the substantial investments from EU funds and the government and the help of EU experts, could the National veterinary laboratory achieve accreditation.

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PEC/CRD 09  
(Original language)

## **CONFERENCE ROOM DOCUMENT**

### **FOOD QUALITY AND SAFETY ACTIVITIES IN ALBANIA**

An international conference on food quality and safety was organized under the auspices of the Ministry of Food and Agriculture by the Veterinary Research Institute “Bilal Golemi”, Food Research Institute and the Institute of Public Health, in collaboration with the IFDC/AAATA Project, Land O’Lakes, GTZ, and the Technological Education Institute, Thessalonica, Greece. Several Albanian and foreign business institutions, including INSIG, SOROS, HIT, Floryhen, AM-Grup, EHW GmbH, EN-ZY, AJKA, JAL, BLOJA, Meat–Master, Delta S.A (Greece), Hellenic Catering (Greece), Tsantalís (Greece) and Nestle & Co (Greece) also contributed to organising the conference.

The goals of the Conference included the following:

1. Identify the progress already made in improving food safety and quality control and develop recommendations for improvements.
2. Facilitate the establishment of contacts and information exchanges related to experiences with neighbouring provinces and countries (Kosova, Greece, Italy, and FYR Macedonia), and international institutions such as the World Bank, European Union, USAID, GTZ, etc.
3. Harmonize the application of new food quality and safety control techniques by Albanian research institutions, which are in actual use in many other countries.

Approximately 200 specialists, researchers and entrepreneurs participated in the Conference from the following sectors:

- Albanian research and educational institutions;
- Ministry of Food and Agriculture - veterinary and food quality control inspectors from 12 prefectures (local and national level);
- Ministry of Health - primary health care inspectors from 12 prefectures (local and national level);
- Representatives of private businesses (meat processing, milk production and processing, egg production, fruit and vegetable processing, edible oil processing, milling industry, etc.);
- International donors operating in Albania (USAID, GTZ, EU, World Bank and Italian and Greek companies and individual contributors);
- Researchers from Kosovo, FYR Macedonia, Greece, Italy, Israel, etc.

The two-day conference addressed issues related to quality and safety of foodstuffs of animal and plant origin with special emphasis placed on the safety of locally produced food products.

The importance and relevance of the issues related to food safety and quality, which were addressed by the Conference, were emphasized by high level Government Officials, including the President of the Republic of Albania, Prof. Dr. Rexhep MEIDANI, and the Minister of Food and Agriculture, Mr. Agron DUKA. Emphasis was placed on the work done thus far in regard to the food industry in Albania and the need for further measures to be taken to improve the industry.

The discussions of scientific papers presented in both sessions of the Conference focused directly on major concerns of the food industry. The following proposals were generated by the Conference regarding a range of further improvements required for the industry in the area of legal issues; the role, construction and strengthening of control services; and, the need for collaboration between national and foreign institutions.

### **1. Legal Issues**

- The present Law on Food should be revised in order to harmonize it with respective European laws. This step would lead toward eventual integration of Albania in the European Union. It was specifically pointed out that revision of **Chapter 7** “Governmental Control of Foodstuffs” should be directed at the reorganisation of national food control services into a single control structure.
- Drafting should be completed on governmental laws necessary for the proper implementation of the Law on Food.
- The Draft Law on Olive Oil should be sent for legislative approval while continuing the work on drafting corresponding governmental laws.
- Work should begin immediately on the Albanian Codex Alimentarius (national regulations on food safety, standards and practical rules). The Codex will serve the needs of Albanian consumers and exporters as well. Efforts should be made so that the standards would be fully recognized by food producers. This approach would ensure that producers recognize which standards are obligatory and must be met in order to produce higher quality and safer food products that could be accepted on EU markets, thus creating greater export opportunities.

### **2. The Role of Food Control Services**

- The role of the existing food control services should be strengthened to improve the effectiveness of the controls and law enforcement to avoid their withdrawal due to pressure or non-legal actions, which were seen as harmful.
- Control services should pay greater attention to preventing product adulteration, particularly for products such as olive oil, alcoholic and non-alcoholic drinks, dairy and meat products and to avoid false or misleading labelling, etc.



- Control services should also focus on food safety issues for canned products; especially can sterilization and control of hazardous metals.
- Control Services should exercise their legal authority to halt the marketing of eggs that do not meet standards due to: small size; the amount of time kept under refrigeration; or marketed when they do not meet the standards, etc.
- Special attention should be given to controlling the radioactive levels of foods of animal and plant origin. As emphasized in both sessions of the Conference, the level of radioactivity is an issue as it hurts every kind of product despite its origin, but it is even more serious for those products originating from areas close to where the Chernobyl accident occurred.

### **3. Organization and strengthening of Controlling Services**

- Current control services should be reorganised into a national food control service that would include the veterinary, quality and public health inspectorates, possibly to be named the National Food Control Centre. The reorganised control service would require a new executive law.
- Existing control services, such as the National Board of Foodstuffs, should actively analyse and evaluate actions in order to improve the food industry and the Law on the National Board of Food Control should be revised, especially those articles having to do with its composition and authority. The Board should be composed of well-experienced and reputable individuals, including representatives from private businesses. The authority of the Board should be increased to give it executive authority in addition to its power to co-ordinate and advise.
- The control and enforcement role of food inspectors should be significantly increased. With the strengthening of the responsible governmental control services, the authority of food inspectors must increase.
- Control services should have the possibility to impose monetary fines against violators of the Food Law. The system for the collection of fines should be organized and obligatory.
- Reference point laboratories should be supported with appropriate equipment (laboratory supplies and diagnostic means) in order to strengthen their role. Thus, reference points should be able to carry out rapid and accurate diagnostic analysis at the level of European laboratory institutions. Reference point laboratories should incorporate training courses for regional laboratory specialists in their work programs and the quality of the analyses of the specialists should be monitored afterwards.
- Training of reference point laboratory personnel should be required and it should be continuous.
- Institutions involved in food control should collaborate closely with the aim of co-ordinating their work for the benefit and improvement of the food industry sector, resolving any past disagreements.
- Investments to set up new laboratories and control services should only be with the approval of the specialised research institutes charged to function as reference point laboratories. The establishment of new laboratories and their efficacy should be the responsibility of the National Board of Foodstuffs Control.

#### **4. *Collaboration among Albanian Institutions and with Foreign Institutes***

- Collaboration and interactions among Albanian institutions concerned with foodstuffs should be increased.
- Cooperation should increase between Albanian research institutions, control services and law enforcement entities and their foreign counterparts. The government should organize this collaboration.
- Support research institutes with qualification programs for their specialists in order for them to be able to apply new methods and techniques that are rapid and efficient for food control.
- Support research institutes in establishing new laboratories, which do not yet exist but are a necessity, as a priority task and a requirement of the European Research Institutions (ERI). For example, setting up a product adulteration identification laboratory at the Food Research Institute, or a BSE laboratory at the Veterinary Research Institute. This approach would improve compatibility and enable Albanian researchers to closely cooperate with European scientists and solve existing problems in due time.
- The government should financially cover food control. The present practice of payment on an individual basis for food control analysis is not acceptable and it does not comply with European legislation.
- Border Customs offices should not be referred to as the Interior Customs office as this creates confusion in regard to food importers check up.
- The government should support monitoring food toxins and hormones as well as the quality and safety of imported seafood in order to ensure business continuity and exportation of items such as meat or molluscs.
- Producers' awareness should be increased regarding the necessity of GMP and HACCP implementation to ensure business continuation and to improve export opportunities. These systems should be a high priority in the work of local specialized and administrative authorities and entities that are closely related with the private business sector.

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## CONFERENCE ROOM DOCUMENT

### EXPERIENCES OF THE SLOVAK REPUBLIC IN THE FAO PROJECT TCP/SLO/8921(A) "STRENGTHENING FOOD QUALITY CONTROL"

**Dr. Milan Kovac**

**Food Research Institute, Bratislava, Slovak Republic**

This FAO Technical Cooperation Project was completed in June 2001. It enabled the Slovak Republic to create a new concept of food legislation and administration linked to the European Union and Codex Alimentarius.

The main activities of the Project were oriented in the following areas:

#### **1. Food legislation**

Current legal status of food quality management was overviewed and recommendations were made to improve legislation on food quality control and food inspection. Since Slovakia is an associated country of the European Union, and it is obliged to incorporate *Acquis Communautaire* (Directives and regulations of the European Community, which contain also requirements for foodstuffs), the recommendations were made with respect to this fact.

As a result of this activity the Food Act Nr. 152/1995 was adjusted and approved in December 2001. Some important new elements were included, such as preparing the Rapid Alert System, to point out consumer protection as the main concern of the State. Requirements on registration of food production and other ones were improved in links with EU criteria. A new concept of food inspection was enforced; pre-market and market inspection was clearly separated.

More transparency was brought into food import and export requirements – all imported and exported food should meet the requirements of the Food Act. New aspects to be enforced related to food labelling were answered such as a problematic issue of including the prescribed date of consumption. Regarding the 258/97 EEC Regulation the adjusted version of the Act defines the "novel food" which was not being used before.

Respecting the new principle "from stable to table", a whole range of provisions relates to food inspection. This area has become fully compatible with the 89/397/EEC Directive on official food control at all stages, including the entire food chain - food production process, food trade and catering as well as consumer protection regarding fair trade practices.

The new concept of official food control is linked very well to experience with the Aimed Food Chain Monitoring System, which has been run in the Slovak Republic since 1991. Used data on the handling and processing methods have served as a tool of risk analysis and they will be utilised also in accordance with the new food control concept.

The paragraphs on organisation of food inspection bodies met with considerable changes. Responsibilities of the individual inspection bodies are specified in more detail and fields of the individual bodies have been defined very clearly. Only accredited laboratories may provide inspection testing.

Following the EU Food Act concept of the European Food Authority, two Slovak authorities (the Slovak Agriculture and Food Inspection and the State Veterinary Administration) joined together creating the State Food and Veterinary Administration. This body will undertake roles at the national level similar to the ones of the European Food Authority.

The adjusted version of the Food Act entered into force in January 2002. It covers all aspects of food quality management and brings transparency into the process. (Some previous decrees were cancelled.) Linking to the new Food Act version, the individual chapters of the Slovak Food Codex are being verified and adjusted gradually. The process is to be finalised by the end of this year.

## **2. Food Inspection**

The Project showed a need to exclude overlaps in activities of the actual food control bodies. Regarding the new views of the Food Act, food inspection restructuring took place in January 2002. A training course on “Food Inspection” for representatives of the food inspection bodies was held in May 2001 to stress the modern concept. General Principles on Food Hygiene, as a prerequisite to HACCP certification and needs of validation and verification of HACCP systems, were discussed in detail. Elaboration of HACCP generic schemes to address the individual types of food production plants was suggested. The generic schemes should be available to producers gratis.

Unified basic rules of food inspection were specified and described in the Food Inspection Manual, which was distributed to the individual inspection units. A set of inspection equipment was defined and purchased as a model for the next education activities.

The Food Inspection Manual offers guidelines on interpretation of the General Principles of Food Hygiene that have been made available to all inspectors. These guidelines are based on the FAO training manual on food hygiene and the Hazard Analysis Critical Control Point (HACCP) system. The use of a common reporting system for all food inspection agencies has been recommended. The core of the model report is based on the Codex Alimentarius General Principle on Food Hygiene. A second part of the reporting system should be based on Good Manufacturing Practices and standards specific to each type of food.

## **3. Food Laboratory Management**

Following detailed discussions of the FAO consultant and national experts, a 5-day workshop, “Analytical methods for food control”, was organised in December 2000. Participants from individual food control authorities were invited. Thanks to the contribution of a top international expert, method validation as the key parameter of the application of new analytical methods could be discussed in real detail. A whole range of professional documents related to the Codex requirements on new food analytical methods was distributed among the participants to accelerate the unified implementation of the presented knowledge, which was aimed especially at validation reports.

At the end of the workshop, the participants adopted some recommendations to improve the laboratory management system in the food control area including acceptance of Codex Alimentarius criteria as defined for laboratories intended for food export and import control.

A special analysis was aimed at the laboratory equipment of food control bodies regarding the roles of the laboratories. This analysis led to the purchase of some basic food control equipment.

Following the recommendations of the Project workshop, Codex criteria were summarised and compared with the actual situations in the Slovak Republic. The report was drafted by the Secretariat of the Slovak Food Codex Committee and distributed to food control laboratories for application (December 2001).

All activities in the three above-mentioned areas were underpinned with a one-week Study Tour by 8 Slovak food experts to Denmark, organized by the Danish Veterinary and Food Administration. Finalising the Project, a workshop aimed at the WTO SPS and TBT Agreements was held (May 2001) to explain related issues to participants from Ministries, food production associations and representatives of consumers groups.

### **Conclusions**

- Results of the Project contributed to strengthening food quality control in the Slovak Republic. The impact of the Project was enhanced by the efficient collaboration among FAO consultants and Slovak experts as well as by the good working relation between the SR Ministry of Agriculture and the FAO Sub-regional Office for Central and Eastern Europe in Budapest.
- At the final meeting to the Project it was suggested to utilise the Project as a model for other Central and East European countries. It was also recommended that the Slovak Republic be mandated to complete the training of inspectors of the CEE countries in the HACCP system. To ensure uniformity of the interpretation of the food inspection results, consideration should be given to train all inspectors on food hygiene by using the same FAO Training Manual on Food
- Hygiene and the HACCP system as a common training standard. Based on the experiences of the FAO Project, such training courses should consider also HACCP validation, rapid microbiological methods involving PCR, GMO food testing, validation of analytical methods, and interpretation of analytical results.

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PEC/CRD 11  
(Original language)

## CONFERENCE ROOM DOCUMENT

### EXPERIENCES IN APPLICATION OF HACCP SYSTEMS IN SMALL AND MEDIUM SIZED BUSINESSES IN HUNGARY

**Dr. András Sebők**  
**Campden & Chorleywood**  
**Food Industry Development Institute, Hungary**

A model scheme was developed to promote the widespread application of HACCP systems in accordance with principles of Good Hygienic Practice in SME companies. The scheme was organised by industrial Research and Development (R+D) personnel with support from the Hungarian Ministry of Agriculture and Regional Development (MARD). The scope covered products of plant origin, preserved foods and catering.

The principle objective was to develop HACCP models for subsequent implementation as practical systems in food businesses within particular sub- sectors, and also to:

- generate industrial awareness
- assure participation of industry in the: development of the models; discussion of legal frameworks; and understanding of industrial self regulation.
- reduce complexity and cost of system development.
- promote ownership, and sustained operation of the systems by the companies involved.

Under the technical leadership of an R+D organisation, a steering committee was formed to, establish objectives, review progress, solve problems and provide recommendations for government. Official participation included experts from: the Food Industry, Veterinary Health and Food Control, departments of MARD, Ministry of Health, Ministry of Economy, the Technical Development Agency, the relevant trade associations of EFOSZ (Hungarian Federation of Food Manufacturers), and the Product Council for Fruits and Vegetables.

#### **Creating awareness**

To create awareness in the model scheme an initial seminar, including presentations by EU experts, was organised for 140 key representatives of industry and food control authorities. Sector specific seminars and presentations at appropriate publicity events were subsequently organised with the trade associations and EFOSZ to promote the importance of food safety management and the benefits of the scheme. Introductory seminars were provided at each project milestone.

## **Training system**

For industrial participants, 3-day HACCP workshops were organised including the principles and benefits of HACCP systems, GHP, and case study exercises requiring the development of documented HACCP plans. For food control officers the group exercises focussed especially on typical failures and verification methods. Specific versions were developed for agriculture and catering.

Short (2 hour) courses for senior factory managers explained the basis for food safety management and the principles and benefits and implementation of HACCP. Short courses for operators emphasised typical hazards, their importance within the system, the consequences of failure and record keeping.

## **Development of HACCP plans**

At very small businesses, group training on the development of sector specific hazard libraries and generic HACCP models modified for individual businesses provided for successful HACCP implementation. Forms provided assistance in system documentation and record keeping. Implementation of GHP's and priorities for improvement were discussed with local teams.

The standard approach included initial validation and verification of the HACCP system as a training exercise.

## **Development of sector specific Good Hygiene Practice codes**

In Central and Eastern Europe, food safety regulations were historically prescriptive and left little flexibility for industry to build best practice into food safety management systems. The concept of self regulation by industry was not developed. There was a need for reference books providing benchmarks on industrial standards and how they might be practically achieved.

In Hungary the first general GMP guide was developed by a multidisciplinary working party in 1996. A template for GHP codes followed and led to the GHP codes for Canning and Baking. An EU project (BSP-2), administered by CIAA (Confederation of Food and Drink Industries of the EU), and with technical leadership from Campden & Chorleywood Hungary, and with support from EFOSZ, provided funding for the development of five further codes, for flour milling, fruit juice, confectionery, dry pasta and pickles. Codes for chilled prepared fruits and vegetables, and for frozen foods are in preparation. This latter code involves co-operation between the Hungarian working party and the Czech and Polish Federations.

## **Handbooks, guidelines**

Technical guidelines were produced providing advice for SME's at minimal cost. They include Hungarian translations of standard HACCP texts such as CCFRA's "HACCP, A Practical Guide", simple cartoon books for operators, and GHP guides relating to specific subjects such as, Identification and Prevention of Foreign Body Contamination, Water Hygiene, Hygienic Building Design, and a code for Assured Vegetables.

**Technical support**

Specific support was provided in relation to, the prevention of foreign body contamination, heat treatment validation, cleaning and disinfection, rapid microbiological methods, specification review, and food legislation. SME's were advised on how to participate in official funding schemes aimed to improve factory hygiene.

**Validation and verification services**

An optional validation and verification service was established for those companies, needing external support for regular review of their HACCP plan.

**Publicity**

A publicity plan was implemented to disseminate the results of the project through industrial seminars, participation in international food exhibitions, conferences and the production of leaflets. Press conferences and media interviews were organised and lists of scheme participants were made available to the major buying organisations

**Education**

Undergraduate courses and textbooks on Food Safety and Quality were developed for two universities.

**Government support**

The scheme was a voluntary initiative, not based on government support but which aimed to attract funding through public application and from industry.

Government helped however in the development of implementation strategy and a public funding scheme opened by MARD enabled food organisations to obtain up to 50% of costs for the development of HACCP plans.

The development of GHP and other technical guides, and the major seminars, were funded either by international support (mainly EU) or by the government (mainly MARD).

The rapid implementation of HACCP was helped by the timely development of legislation, in consultation with industry, and which introduced mandatory obligation, albeit with a period of transition.

Industrial experts provided significant help in the overall training of the food control authorities.



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**Results**

Since 1997 over 410 food businesses participated in the model scheme and some 3000 individuals have received training. The progress of the scheme and available support encouraged general implementation of HACCP in Hungary. By the end of 2001 the majority of food business had some level of HACCP system. Many people, trained within the model scheme, started to provide help for other businesses in their own sector.

**Lessons learned**

The campaign for creating awareness in Industry was central to the success of the programme. EFOSZ and sector trade associations were key in representing industry in the development of strategy, awareness, generic HACCP plans and sector specific GHP codes, for providing industrial representation in discussions on legislation and in dissemination of results.

The generic HACCP models and GHP codes helped to reduce the time and costs of system development. It was learned however that publication of a full generic model is not always advisable as certain companies and consultants may have temptation to use this without the necessary adaptation for local conditions. Published material therefore included only typical CCP's, control and monitoring activities, critical limits and corrective actions.

Implementation highlighted the importance of the full chain approach to food safety. Certain hazards can only be controlled during agriculture and the safety of products may be compromised by bad practices during distribution.

Government support for the development of HACCP plans had greater impact than simple financial value. It motivated food businesses to invest their own money and time, which in total value may greatly exceed that of government funding. Official funding was vital however in developing the GHP codes and technical guides, as industry was insufficiently ready to fund such activities.

The attractiveness of the project to industry was greatly assisted by the imminence of European accession; the availability of technical support to identify needs for investment in food hygiene and in the selection of feasible solutions; and help in the development of applications for funding.

Finally the planned dissemination of results helped multiply the wide-scale application of HACCP systems.

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PEC/CRD 12  
(Original language)

## CONFERENCE ROOM DOCUMENT

### CONSUMER ACTIVITIES RELATED TO FOOD SAFETY AND QUALITY IN CENTRAL AND EASTERN EUROPE

Prepared by Consumers International,  
Office for Developed and Transition Economies  
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#### **Consumer Organisation Activity in Central and Eastern Europe**

Consumers International, the global federation of 265 consumer organisations worldwide, works closely on food safety and quality issues with consumer organisations in the Central and Eastern (CEE) region. Currently Consumers International has two programmes in the CEE region, a 3-year Food Safety project and a 3-year Codex Training programme, the codex programme being the first policy training Consumers International has run for its members in this region.

Most of Consumers International's 30 member organisations in Central and Eastern Europe are less than 10 years old. With markets opening up a variety of goods has become available, but with that also problems. As the market developed, misleading advertising, unsafe and poor quality goods, bad services and lack of redress have been major issues. In terms of food issues there is a great deal of similarity in the challenges each country faces, such as regional and international harmonisation alongside their national regulations. The prominent issues consumer organisations are trying to tackle are, food hygiene, food labelling, lack of regulation and enforcement, additives, safety of products, GM foods, food contamination and identification/traceability.

#### ***Current CEE consumer organisation research and campaigning on food standards:***

Some of the activities CI's members are carrying out under the two capacity building programmes;

- The Bulgarian Consumer Federation has carried out and published comprehensive comparative research on food labelling, and found that enforcement must urgently be improved to protect consumers against fraudulent foods. They have also been running a high profile media campaign on food product safety and quality.
- The Lithuanian National Consumer Federation is carrying out quality and safety testing on a range of foods, surveying consumers on concerns and preferences and building up data on food complaints.
- The Romanian Association for the Protection of Consumers has launched a consumer information campaign and carried out extensive consumer surveying on labelling needs,

particularly for GM Foods, and are lobbying for the setting up of a National Consultative Codex Committee in Romania.

- In 2001 the Ukrainian Consumers Association (UCA) identified banned GM crops growing in the Ukraine. Since this finding they have been involved in a Government Working Group. UCA have positions on all aspects of GM foods and are continuing dialogue with their government on imports, state testing, registration and use of GM products in the Ukraine. UCA has also been providing educational material to farmers, young people and those in rural areas.
- Poor hygiene in meat production is a problem in Croatia. The Croatian Association for Consumer Protection works a great deal on meat hygiene, and will be holding seminars for small meat producers this year and hosting 'round tables' which they have successfully held before, with producers and enforcement agencies. They are also providing advice to consumers about consumer redress after purchasing or consuming harmful products.

### **Successes and Obstacles Related to Food Policy Experienced by Consumer Organisations in Central and Eastern Europe**

#### ***Obstacles***

One issue repeatedly reported by many of our member organisations is that enforcement of food standards is a major problem in their countries. The inspection bodies do not have the capacity to cope with the need. This is compounded by the fact that much fresh foods are bought from stalls at food markets, for example in Macedonia this is estimated to be 40-50%, which are more difficult to regulate.

Another major problem is the lack of a formal consultation system between government and consumer organisations. One example of the formal structure which should be in place is a National Consultative Codex Committee (NCCC). There are National Consultative Codex Points (NCCP) in all but a few of the CEE countries.

The role of an NCCP is set out in the Codex Procedural Manual. A core function of an NCCP is to act as the liaison point with various parties including consumer representatives to ensure the government is provided with an appropriate balance of policy and technical advice on which to base its decisions. However, consultation with consumer groups in this region is extremely low. A 1995 global survey found that consumer groups in CEE countries were the lowest consulted.

Of a survey in 2000 of Consumers International members in Bulgaria, Macedonia, Bosnia, Romania, Slovenia and Slovakia, only one was represented on their national food standards body.

#### ***Successes***

Some of Consumers International's members are tackling the problem of non-functioning NCCC's themselves. An example of a successful meeting was held in Bulgaria in April 2001 that included government, food industry and consumer representatives. More than 40 participants attended this two-day seminar, where issues important to the region were discussed. The meeting helped to build relationships between the Bulgarian Consumer Federation, the Ministry of Agriculture, other government representatives and food producers. It was the first such meeting of its kind. However, this was a 'one-off' meeting enabled by Consumers International funding under the codex

programme. The Croatian Association for Consumer Protection are also planning to follow this model.

Some of CI's members in the CEE region have developed their expertise in regional and international policy through being involved in CI's codex training; and are now drafting papers, writing reports and representing CI's membership at codex meetings. This policy expertise in the consumer groups would be an asset to national delegations. The value of consumer input is wide ranging:

*'Government should obtain the consent of the governed; citizens have a right to participate meaningfully in public decision making and to be informed about the bases for government decisions. Relevant wisdom is not limited to scientific specialists and public officials; participation by consumers and a diversity of groups and individuals can provide essential information and insights about a risk situation. Non-specialists may also help design decision processes that allow for explicit examination, consideration, and weighing of social, ethical, and political values that cannot be addressed solely by analytical techniques, but also require broadly participatory deliberation.'* U.S. National Research Council. *Understanding Risk: informing Decisions in a Democratic Society*. Washington, DC, National Academy Press, 1996.

Consumer participation in national food policy development is very successful in some countries, for example in Norway. The Norwegian Consumer Council is funded by its Ministry of Agriculture to participate in the national delegations in the Codex Committee on Food Labelling, the task force on Biotechnology, the Codex Committee on General Principles and the Codex Commission meeting. A benefit to the government is that the Norwegian Consumer Council have drafted position papers on health claims and on functional foods for the Norwegian National Consultative Codex Point. The NCC has found that this has resulted in better communication with their government and food authorities. Due to the funding, the Norwegian Consumer Council are now experienced in international food policy and one member of staff is now responsible for working with various Ministers on international strategy. The Norwegian Consumer Council are funded by their Ministry of Agriculture to run seminars for government and non-government organisations for discussion on food policy, and also funds training of the Norwegian Consumer Council staff on public speaking. The Norwegian Consumer Council are publicly very active which builds the trust of the consumers in their government. The case of Norway is a good example of how the government and a consumer group are working together benefiting each other, and ultimately Norway's consumers.

## **Recommendations:**

### **(1) National Consumer Consultation**

Governments need consultation with consumer organisations to inform them of consumer needs, perceptions and information related to issues under discussion in order to develop national policy. It is important in the CEE region to establish links and strengthen co-operation between government departments and consumer organisations for reasons outlined in the previous section. A great deal of expertise is available in Consumers International's member organisations, and many are building up very useful data banks of consumer research. A successful example of consultation through formal mechanisms is National Consumer Councils, e.g. in the UK, Norway and Italy.

### **(2) Training to Strengthen the NCCP and Its Ability to Consult with Consumers in the CEE region**

This is necessary to improve both the credibility and the effectiveness of the codex process. Training for NCCC's to function properly is necessary in the CEE region for those responsible for developing the national position in consultation with consumer representatives and other interested stakeholders. NCCP's should hold regular public meetings with, and constantly strive to involve, qualified participants from these parties. CEE countries need assistance to achieve these objectives. CI would like to see FAO and WHO facilitate training for government and consumer groups so that they can more effectively participate in the national policy making process, manage food safety concerns and strengthen food safety control systems in their countries.

### **(3) Use of FAO / WHO Funding to Support Capacity Building in CEE**

Global surveying has revealed differences in balance between transitional and developed countries representation in global food standard discussions. Governments in the CEE region are in-transition but face many problems which are closer in similarity to developing countries compared with developed countries. The CEE countries are under-represented in the codex process and must be included in the process for a number of reasons including facing greater food-related risks and have less protection. In 2001 the Codex Alimentarius Commission agreed that capacity building in developing countries for their effective participation in Codex should be the highest priority. CI welcomes the initiative of the Trust Fund and hopes that FAO and WHO can facilitate funding for CEE governments. Building the capacity of transitional countries should improve their ability to effectively consult with consumer organisations and other interested parties. This will enable transitional countries to more effectively manage food safety risks, improving quality management, the quality and safety of products in the domestic market and will increase the confidence and trust of consumers.

Thanks to the Consumers International members who contributed to this paper.

Founded in 1960, **Consumers International** (a non-profit organization) formerly IOCU, is a federation of consumer organizations dedicated to the protection and promotion of consumer' interests worldwide through institution-building, education, research and lobbying of international decision-making bodies. An independent foundation, Consumers International has 265 members in over 120 countries

PEC/CRD 13  
(Original language)

## CONFERENCE ROOM DOCUMENT

### REFRIGERATION FOR FOOD SAFETY AND QUALITY

#### Statement of the International Institute of Refrigeration (IIR)

*François Billiard, Director of the IIR  
and Daniel Viard, Assistant Director of the IIR*

#### Introduction

- Temperature is a key parameter ensuring food safety and wholesomeness: when the temperature and the environmental conditions are optimal, one bacterium in the morning can produce millions of bacteria in the same afternoon. Fortunately, refrigeration technology makes it possible to slow or totally inhibit microbial growth and the production of toxins.
- Development and modernization of a country cannot take place without refrigeration, and refrigeration plays an important role in food safety and health: it has very substantially decreased the occurrence of foodborne diseases in developed countries.
- Refrigeration is present all along the food chain: more than 50% of foodstuffs in developed countries (1.2 billion inhabitants) are retailed under refrigerated conditions; one can speak of a cold chain from raw materials (post-harvest) to food on the table of the consumer. And food safety starts with the raw materials. However, it took about 30 years in most developed countries (1945-1975 in Europe for example) to set up reliable cold chains.
- As there is little mention of refrigeration (or even temperature levels) in the different working documents prepared for this Forum, this is an opportunity to link IIR activities with FAO/WHO's and European countries' efforts to tackle food safety and quality issues.
- **In its approach to sustainable development, the IIR is deeply involved in:**
  - o risk management, through its expertise in refrigeration and good practices;
  - o capacity building through institutional strengthening and technical assistance involving all refrigeration stakeholders: decision-makers, members of the civil service, the industry, researchers, teachers, food manufacturers and refrigeration practitioners.
- **Several working papers have highlighted the need to tackle food safety and quality issues with a coordinated, integrated holistic approach, for instance between different governmental bodies; this is how the IIR works with ministries in charge of food, health, fisheries, energy, trade, industry, research, university, education, and the environment, and also with all stakeholders.**

#### Recommendations

The International Institute of Refrigeration :

- recommends the implementation of refrigeration technology that is environmentally friendly, energy-efficient and suitable for the preservation and retail sale of perishable foods.
- recommends introducing, where this has not already been achieved, maximum recommended temperatures for food storage and distribution, in specific codes of practice governing products. The IIR also recommends harmonizing, on a global level, regulatory or recommended temperatures for the storage of perishable foodstuffs; such harmonization has already been achieved in the refrigerated-transport field thanks to the Agreement on International Carriage of Perishable Foodstuffs (ATP) set up by the Economic Commission for Europe of the United Nations (Inland Transport Committee).
- recommends using air-temperature measuring instruments (temperature recorders in refrigerated-storage facilities and refrigerated vehicles; thermometers in small cold rooms, refrigerated display cabinets and domestic refrigerators), in order to improve cold chains from the producer to the consumer. These tools provide a good indication of how well refrigerating equipment is operating.
- recommends stricter monitoring of the interfaces between various links in the cold chain and the development of good practices; such policy makes it possible to prevent temperature abuse which adversely affects food quality and wholesomeness. Regulations, standards, and codes of practice play key roles in this respect, for instance by recommending fast loading and unloading of refrigerated vehicles, closed, air-conditioned loading docks, and the use of insulated or refrigerated shopping bags at consumer level.
- recommends the implementation of stricter measures governing foods prone to contamination with psychrotrophic bacteria such as *Listeria monocytogenes* or *Yersinia enterocolitica*: lower temperatures and hurdle technology are effective in this context.
- recommends the implementation of temperature traceability. Each stakeholder in the food cold chain must receive information on the time-temperature history of the products from the operator handling the previous phase and must in turn provide all necessary information in his possession to the next stakeholder in the cold chain.
- recommends incorporating the HACCP approach in training in good refrigeration practice, and vice versa incorporating good refrigeration practice in training HACCP for food safety regulators.
- recommends raising consumer awareness: it has been demonstrated that the average temperatures inside domestic refrigerators are above the maximum recommended temperatures and that consumers do not always comply with use-by (expiry) dates.

### **Presentation of the IIR**

The International Institute of Refrigeration (IIR) is a scientific and technical intergovernmental organization enabling pooling of scientific and industrial know-how in all refrigeration fields on a worldwide scale.

Its mission is to promote progress and expansion of knowledge and to disseminate information on refrigeration technology and all its applications. The IIR is committed to improving both quality of life and the environment, and thus contributes to sustainable development.

The IIR's members are Member Countries (currently 61) who take part in the IIR's activities through their IIR commission members. The IIR has also collective members (companies, laboratories, universities) and private members.

The IIR offers a wide range of services tailored to meet the varying needs of its worldwide member-country network, national and international organizations, decision-makers, industry, university, and refrigeration practitioners.

These services include education and training, information resources, a database, several periodicals, and publications and proceedings of conferences; among these, there are books on food technologies concerning all products (chilled, frozen) and specific products (fish, fruit and vegetables, meat and milk), their storage, transport and distribution.

All key information is available on the IIR's Web site: [www.iifiir.org](http://www.iifiir.org)

The IIR has been asked by FAO to revise the Code of Practice for the Processing and Handling of Quick Frozen Foods of the Codex Alimentarius (joint FAO/WHO Food Standards Programme).

Finally, the IIR has been asked by UNEP (United Nations Environment Programme) to prepare a report on the achievements and challenges of the refrigeration sector to serve as input to the World Summit on Sustainable Development (Johannesburg, September 2002).



**CONFERENCE ROOM DOCUMENT****COORDINATION OF PUBLIC HEALTH, VETERINARY AND CONSUMER NETWORKS  
EXAMPLE OF THE "*LISTERIA*" UNIT****Delegation of France**

Listeriosis is monitored in France via the *Déclaration Obligatoire* (DO Mandatory Notification)<sup>27</sup> and the *Centre National de Référence* (National Reference Center CNR) of *Listeria*, at the *Listeria* Laboratory of the Institut Pasteur, which centralises and defines the strains de *L. monocytogenes* from microbiology laboratories. The DO enables the physician of the *Direction Départementale des Affaires Sanitaires et Sociales* (Health Local Authority DDASS) to gather early information on the food consumption of patients during the 2 months preceding the symptoms.

**Signalement and "pre-alert" phase**

When the CNR detects or identifies, at least 3 cases due to an "identical" strain (strain with the same DNA profile), among strains isolated in humans, over a period of 14 weeks, it informs the members of the "*Listeria Unit*" by e-mail. The CNR has also a data-base of strains of food origin, created from strains sent for typing by veterinary and food hygiene laboratories.

The *Institut de veille sanitaire* (InVS), under the aegis of the *Direction générale de la santé* (DGS, Department of the Ministry of Health) analyses information on patients (DO sheets and food forms) and decides, on the basis of elements suggesting the existence of a common source of contamination, to move to the pre-alert phase.

*In this pre-alert phase:*

- the CNR accelerates analysis of results concerning human strains and creates a history of the strain (human cases). It also seeks, among the food strains of the previous 6 months, those which show the profile of the pre-alert;
- the *Direction générale de l'alimentation* (DGAl Department of the Ministry of Agriculture) and the *Direction générale de la concurrence de la consommation and de la répression des fraudes* (DGCCRF Department of the Ministry of Economy), according to the information transmitted by the InVS on the consumption of patients, analyse the available information (checks, withdrawals of products, etc) ensuring, if necessary, transmission to the CNR of *listeria*, of certain strains isolated in production or distribution. They also seek the origin of

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<sup>27</sup> The DO system was put in place progressively during the 2<sup>nd</sup> quarter of 1998 by Decree n°98-69 of 13 March 1998

food strains with the profile of the pre-alert, which may already have been detected by the CNR.

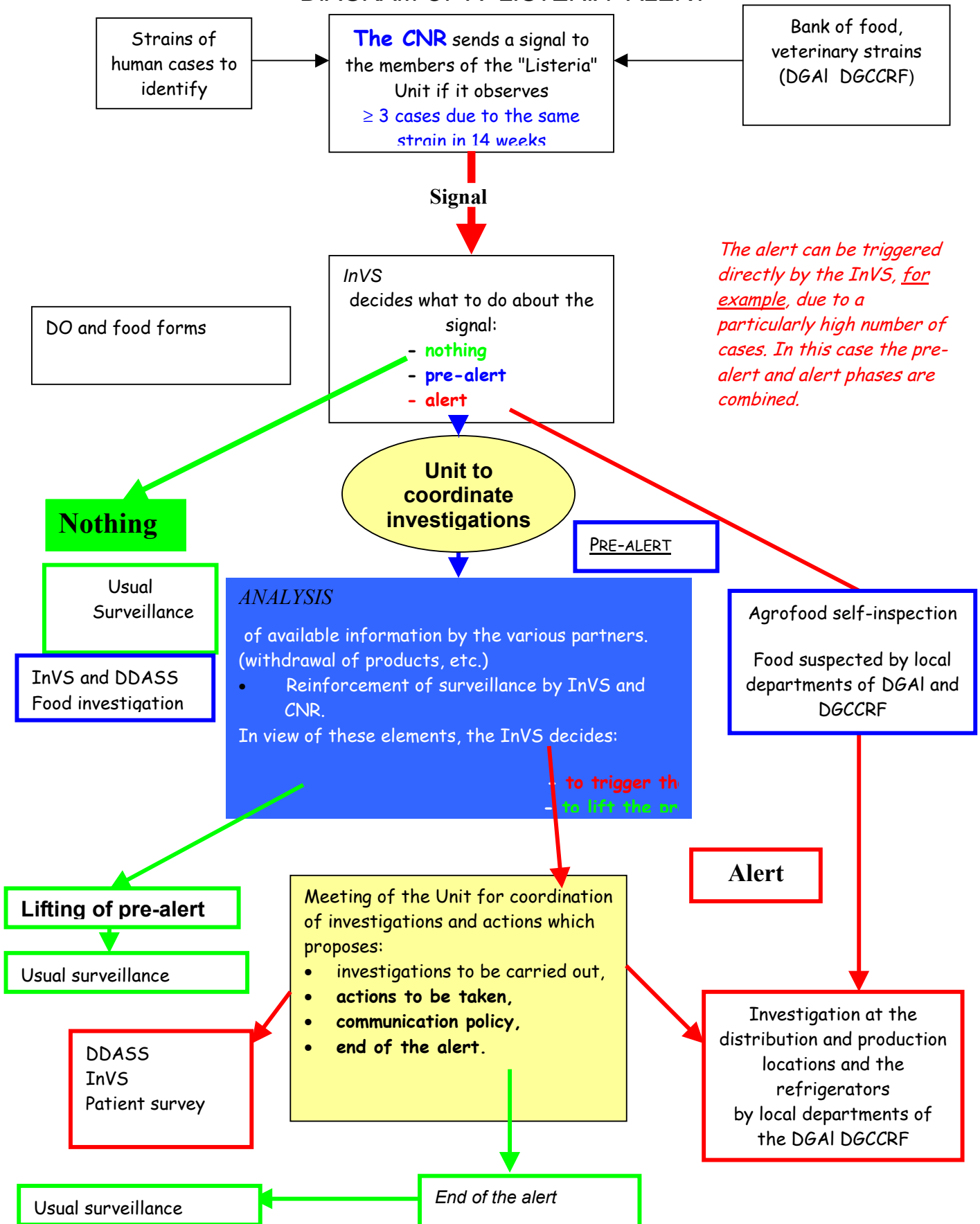
It may be that the InVS, notably in view of all the available information, decides to trigger the alert immediately without a pre-alert phase.

Triggering of the alert leads to activation of the "*listeria* Unit" responsible for coordinating investigations and actions. This Unit consists of representatives of the DGS, InVS, DGAI, DGCCRF and CNR of *Listeria*. If necessary it can seek the assistance of experts. Within the Unit, the role of InVS and CNR of *Listeria* entails technical support and aid in decision-making.

#### **Alert phase:**

- When the alert is triggered, local services are informed by their respective administrations. They are reminded of the information circuit in times of alert, in particular, the need to send the bacterial strains urgently to the CNR of *listeria* and send the food forms rapidly to the InVS.
- The various partners of the coordination Unit decide on the investigations to be made in order to identify any common food at the origin of these cases and avoid new cases by implementing appropriate measures. In all cases this Unit defines, the communication which will be made to the administrative departments concerned. This communication complies with the communication protocol, established in May 2000, in the event of non-conformity of a food vis à vis *Listeria monocytogenes*.
- In the framework of regulatory obligations, communication to professionals, the relevant authorities in other countries, European surveillance networks is at the initiative and under the responsibility of each structure of the Unit according to their own roles. The other members of the Unit are kept informed of the information transmitted in this context.
- The co-ordination Unit also evaluates the end of the epidemic and proposes the lifting of the alert. The alert may be maintained for some time after the epidemic (important information in particular for local State departments and for the CNR which only resumes routine procedure for strains when the alert is officially ended).

## DIAGRAM OF A "LISTERIA" ALERT



## CONFERENCE ROOM DOCUMENT

### THE SITUATION OF FOOD SAFETY AND QUALITY IN THE AZERBAIJAN REPUBLIC

**Azerbaijan Republic**  
**Ministry of Agriculture**  
**Management of Plants Protection and Quarantine**  
**Chief specialist, Radik Kerimov Mamed**

On behalf of the Azerbaijan Republic, I would like to express my appreciation to the Director-General of the Food and Agriculture Organization of the United Nations, and the Director-General of the World Health Organization and also the organizers of the Conference, for the invitation to participate in the Pan European Conference on Food Safety and Quality.

Nowadays discussions of food safety and quality are addressing one of the global problems.

One of the main conditions for the increase of economic performance as well as the efficiency of labor is to increase quality and the improvement of the quality and the assortment of foodstuffs available. The problems of production requirements for the population are of global importance. This is connected with an expanding population and its increased requirements for horticultural and livestock production.

Comprehensive measures are required in each country to solve the problems of increasing quality and providing food safety. Legislative authorities have passed several normative-juridical acts to maintain the standardization and safety of food and allow an increase of food products in the Azerbaijan Republic, without breaking or contradicting producer and consumer interests.

The questions on safety and quality control of foodstuffs have been reflected in the laws adopted by the Azerbaijan Republic, "About Producer's Rights" from 19 December 1996 and "About Foodstuffs" from 18 November 1999. These laws reflect all issues related to the protection of the safety and quality of food products.

Based on the above mentioned laws, a number of normative-juridical acts have been passed which regulate the protection of the health of the population, sanitary and phytosanitary control, implementation of new standards, determination of the degree of contamination by various organisms, toxicity determination, identification and control on pests and plant diseases, determination of food quality, strengthening of dietetic, medicinal and ecologically clean products, which are fortified with missing mineral salts, iodine and iron.

On the basis of the above mentioned issues and in line with the needs for the social protection of the population, we have adopted the "Programme about Safety of Food Products of the Azerbaijan Republic." This Programme is taking into account the further abundance of safe food products.

In reference to the fulfillment of the food safety programme, the most actual problem is the guarantee for foodstuffs that have respected high-quality microelements for the improvement of the socio-economic status of the population. That is why enrichment of flour by salts, iron and iodine has kept its importance in actual practice. In this field it is also important to strengthen the control of food products from the point of view of setting controls for the identification and control of toxic elements, heavy metals, nitrates, pesticides, radionuclides, etc. in food products.

Toward this goal and the realization of controls for providing efficient solutions, a very important problem is the reconstruction and modernization of stationary and movable laboratories equipped with modern analytical apparatus for the control of the quality of foodstuffs.

The solution to these problems for Azerbaijan, which has a million people who have become refugees and IDP and which has 20% of its territory occupied by Armenia, is very complicated.

However, food safety plays an important role in flora and fauna protection and for population health.

In spite of the difficult economic situation, our Government foresees in its "Program of product safety for the Azerbaijan Republic" the carrying out of measures for the purpose of increasing the quality of foodstuffs and ensuring product safety, foodstuffs quality, social defense of the population and readiness to address any extraordinary situations, etc. in the period of 2002-2010.

If Azerbaijan is to develop and integrate into the world economy and, in this case, succeed in reaching the above-mentioned goals, the Government is in need of the humanitarian and technical assistance of foreign countries and international organizations.

For the further realization of the Program, the practical advice and recommendations of the Food and Agricultural Organization and the World Health Organization will benefit the Republic of Azerbaijan.

## CONFERENCE ROOM DOCUMENT

### FOOD SAFETY AND QUALITY

#### Italian contribution

by

- *Ministry of Foreign Affairs*
- *Ministry of Agriculture*
- *Ministry of Health*
- *National Research Institute*
- *Superior Institute of Health  
for Food and Nutrition*

#### Food safety

The signalling of more and more frequent food emergencies occurred in Europe in the last years created a great input in changing the approach of the theme of food security in order to manage the risks for human health that could occur in any point of the food chain. In this new approach, food safety is based on the three components of risk analysis (assessment, management and communication) all along the food chain. A national structure for food safety is not yet active, but a food safety policy involving Governmental Institutions is already regulated by the principles of risks analysis.

In fact, the Ministry of Health through the General Direction of the Veterinary, Food and Nutrition Public Health is entrusted, at the central level, of the management of the risk. As far as risk assessment related to food contaminants is concerned, this central structure is supported by the National Health Institute (ISS) and by the Superior Health Council, and for specific topics by the official laboratories of Experimental Zoo-prophylactic Institutes, by the National Institute for New Technologies, Energy and Environment (ENEA), by the Interministerial Commission for Biothechnology, by the Consultative Commission for special nutrition products, by the Interministerial Commission for evaluation of notifications aimed at new products and new ingredients, Consultative Commission for pesticides. The Ministry of Agriculture through the activity of the Inspectorate for Frauds Repression is connected with food production and manufacturing. The Office is present in the National territory with 22 regional offices coordinated by the central structure. Moreover, the National Research Institute for Food and Nutrition, which depends on the Ministry of Agriculture, has among its tasks the promotion and development of research on food safety and quality; it performs analysis of exposure to food chemicals with the use of its own food survey databanks, in collaboration with the Superior Institute of Health.

Programmes for the assessment of contaminant presence in the food chain at National and European level are active at the moment. However, for some contaminants and additives data collected until now are not sufficient for an adequate assessment of risk. Official controls to be performed at regional level are determined by annual programmes. The official controls of food quality and safety are guaranteed by the Local Health Units and District Public Health Laboratories and specifically by veterinary Services for animal-derived foodstuffs and by public Hygiene Services for other food categories.

In addition to monitoring programme, evaluation of epidemiological studies on food borne diseases are another means for identification of risks. In Italy notification is mandatory only for diseases related to specific food pathogens such as *Salmonella*, *L. monocytogens*, *Brucella*, *C.botulinum*, *Hepatitis A*, *Trichinella* while for other pathogens, programmes for optional surveillance are active.

### Food quality

“Quality” has become a central topic in Italian agriculture and food industry; a complex scientific and technological debate aimed at the definition of quality concept is at the moment in progress. Dramatic events such as BSE, dioxin, pesticides and hormones contaminants, and the increasing number of pollution-related cancers, focus consumers and industry attention on safety. Respect to the past a different idea of quality is gaining ground. The modern concept is summarised in the “quality profile” of a product that include different aspects of its value. In addition to that, a specific request for effective guarantees and product certification is performed by producers and consumers.

Quality involves a deep re-organization of farms and production technologies. Control systems, certification standards, the whole business management have to be checked in function of the new point of view. Scientific institutions can support producers by setting up new technologies (biological, organizational and computerized), according to criteria of quality and safety.

Food composition assessment and new technologies for food production are the focal points in the modern approach. It should be pointed out that substantial changes occurred over the past few years in the production and processing of certain classes of food (organic foods and light products).

In order to increase competitiveness on the world market, Italian farmers have addressed their efforts towards the achievement of qualitative targets aimed to meet both the needs of technological processes and safety requirements. The selection of crop strains and the use of new techniques for growing and preserving food (e.g. integrated pest control, preservation of cereal grains by refrigeration) are examples of this trend.

As far as food processing and preservation techniques are concerned, production is increasingly oriented towards the use of mild technologies characterised by extremely selective and minimal treatments. The global effect is a reduction of thermal and mechanical damage as well as chemical and biological contamination. This approach has been extensively applied in the manufacturing of fat containing foods, with particular regard to products containing saturated fatty acids and cholesterol. Manipulation of composition was traditionally performed in the sector of meat production even though dairy products are a group of food in which changing of composition is becoming more and more frequent. The fastest-growing products in this sector are the low-fat or

“light” foods. In this case, modification of legislation was necessary in order to provide consumers with an adequate information.

The increasing consumption of functional foods and herbal products is another characteristic of the modern request in industrialised countries. The inclusion of these products in a normal diet was considered, in the traditional definition, to promote well-being and health. Functional foods are defined as products in which key nutrients had been added in order to increase their intrinsic health benefits. This category includes a wide range of products in which the original matrix is modified by the addition of vitamins or minerals or other bioactive compounds. This large group includes also probiotics, prebiotics, symbiotics, bioactive peptides and lipids, fibre and vegetable extracts. A different category of products are dietary supplements composed by purified form of multimicronutrients and distributed in form of pills or other pharmacological preparations. This group comprises also the large category of herbal products. In the same way, the market shares of cereal grains, and the so-called “wholemeal” products (biscuits, crackers, etc.) are increasing steadily since consumers appreciate the physiological and metabolic benefits of their higher fibre content.

Data on the composition of foods commonly consumed in Italy are provided in tables prepared by the National Research Institute for Food and Nutrition, but the growing number of foods on the market and their continuous evolution makes it essential to update the nutrient composition reported in the tables, especially regarding to micronutrients (vitamins and trace elements) and other components that are recognised to play a role in the prevention or control of a number of pathologies.

Traditionally the relationship between nutrition and health was attributed to food composition in terms of macronutrients. In the modern context, a relevant role is now ascribed to minor compounds such as fibre, antioxidants, vitamins and other bioactive substances. Mediterranean diet products are particularly rich of these compounds, and, for this reason they could be considered as a sort of functional foods. Also modern typical Italian foods contain remarkable quantity of these bioactive compounds; efforts are increasing in the development of processing and storage systems aimed at preserving these qualities. The role of bioactive compounds in preventing chronic metabolic diseases such as cardiovascular affections is largely recognised. The promotion of typical products (controlled and certified in EU legislation), and the protection of traditional foods, often out of the rules but with an intrinsic guarantee of quality are an added value of Italian dietary style.

### **Certification**

An extensive political, technical and scientific debate on standards and certification (part of the broader issue of food quality) has been going on over the past few years within all the relevant Italian and EU organisations.

The debate was generated by the new philosophy behind EU legislation in the matter of food. The “active policy of quality” in the food industry emerging from the documents could be translated in EU encouraging operators to use (also with spontaneous attitude) the instruments indicated by the EU Commission, especially in the Organised Great Distribution (*Grande Distribuzione Organizzata* – GDO).



In addition to “*certificates of identity*” and “*guarantee of geographical origin*” suitable indicate in the label, these instruments include traceability certification of products “*from farm to fork*”. These means are a further guarantee for consumers as far as the identification of products source and production methods is concerned, besides their geographic origin.

## **Nutrition and health**

Diet's influence on health can take many forms: acute or chronic deficiency of essential nutrients; toxic effects of nutrients, non-nutrients or contaminants present in foods. However, the most important element in the context of developed countries is the large diffusion of chronic non-communicable human diseases for which nutrition is an important factor of protection or risk. The main nutrition-related diseases are obesity, cardiovascular diseases, some tumors, diabetes, osteoporosis, goitre, nutritional anaemia, dental decay, cirrhosis, allergy and intolerance. Food consumption patterns are changing rapidly. In the last years, the diet has improved in terms of free sugars, total fat and saturated fats but complex carbohydrates are lower and lower. In Italy and in other industrialised Countries, a recent event is the rapid diffusion of functional foods and herbalist products aimed at improving human nutritional and psychophysical well being.

### **Social costs of diet related diseases**

In Italy, as in other industrialised countries, the most important causes of death are cardiovascular diseases and cancers. In 1996, in Italy, 43% of deaths were caused by cardiovascular pathologies. Among them, coronary diseases were a cause of death in 31% of the cases versus 28% for cerebrovascular affections. Cancer is the second cause of death in Italy with 28% of deaths in 1996.

An evaluation of premature death (before the age of 65) in Italy showed that tumors represent the cause of death with greater contribution to Years of Productive Life Lost (26% versus 15% of cardiovascular diseases).

Direct costs of diseases related to nutrition can be roughly estimated from the National Health System's expenditures. The greater quota of hospitalisation in 1997 was found for cardiovascular diseases (15%) with an average permanence in the hospital of 9 days. Tumors showed a lower frequency of hospitalisation (10%) but a longer permanence, on average, in the hospital (10 days). In Italy, a day of permanence in hospital corresponds, on average, to €500 per patient per day, leading to an amount of 10.000 millions of Euros in 1997 for cardiovascular diseases and tumors. It should pointed out that hospital costs represent only a part of the expenses for health services.

Nutrition can be an important risk or protective factor for many other affections for which. Thus, goitre is endemic in several Italian areas both urban and rural. Obesity is a pathology *per se* and a risk factor for other chronic-metabolic diseases. In 1999 the evaluation of 22.000 children in a central region of Italy showed a prevalence of 27% of overweight and 15% of obesity. For adults, a national survey performed in 1999 showed a prevalence of 33% of overweight and 9% of obesity.

### **Nutrition policy**

The ultimate aim of nutritional policy is to reduce the prevalence of nutritional-related diseases and the social costs and human suffering resulting from them. Diet could reduce the prevalence of cardiovascular diseases *per se*, and by lowering their most important risk factors, such

as blood cholesterol concentration or hypertension. It is estimated that about 35% of tumors could be prevented by dietary strategies.

As regards iodine-deficiency disorders, prevention takes the form of iodine prophylaxis. Investing money in an adequate educational campaign would lead to the widespread adoption of iodised salt and a rapid drop in the high costs of goitre treatment.

The two main Italian authorities involved in nutritional policy activities at national level are the Ministry of Health and the Ministry of Agriculture. The National Research Institute for Food and Nutrition depends on the Ministry of Agriculture and conducts research in food science and in human nutrition. This Institute receives specific funding from the Ministry of Agriculture and the Ministry of Health to perform activities of nutritional surveillance and of nutritional education and coordinates the process of developing tools and setting targets for nutrition. Thus, the production of national tables of food composition, the production of Recommended Daily Allowances for the Italian population and Dietary Guidelines for a Healthy Nutrition are important tools for such activities. The development of a European food surveillance system based on standardised epidemiological databanks including both food consumption data and morbidity data would be most useful to monitor food safety, food quality and dietary patterns and to improve food and nutrition policies at European level.

## **PROPOSALS**

1. Set up a common list of foodborne pathogens to be notified in all European Countries.
2. Define common procedures to assess safety and efficacy of herbal products.
3. Develop intervention strategies and food based dietary guidelines to reach the population nutrition goals established by EURODIET
4. Promote the consumption of foods with a certified quality recognised by law and of traditional regional foods, within education campaigns for healthy nutrition.

### **ad 1. Set up a common list of foodborne pathogens to be notified in all European Countries**

Since foods and drinks are largely traded through the European Region with ever less barriers, it is important that all European Countries follow the same food safety objectives. Therefore, to undertake the risk assessment of foodborne pathogens it is necessary to reach to an European list of pathogens that must be notified. For some of them, in fact, insufficient data on the incidence of infection are available because the organisms are not notifiable or are not considered in the same way in all European Countries. In this view, an identification of priority for the microbiological risk assessment should be undertaken.

### **ad 2. Define common procedures to assess safety and efficacy of herbal products.**

The intake of herbal products has recently been increasing in developed countries, because of their supposed health-related benefits, specifically the improvement of psychological and physiological well-being. However, scientific evidence of the efficacy of these products often lack. For these reasons, a common strategy should be adopted, in order to assess the safety and efficacy of herbal products, and to produce guidelines with appropriate indications for restricted use in relation to certain population groups, before admission on the market.

ad 3. Develop intervention strategies and food based dietary guidelines to reach the population nutrition goals established by EURODIET

EURODIET is a project founded by European Commission aimed at the establishment of nutritional goals for Europe to be reached through food based dietary guidelines. Several aspects of nutritional habits and lifestyle were analysed in order to produce recommendations with a strong scientific basis aimed at improving the health status of the population. Translating nutrient goals into dietary guidelines is a complex process for which a standardised methodology is required. Each European country should develop food based dietary guidelines and intervention strategies to reach the population nutrition goals established by EURODIET.

4. Promote the consumption of foods with a certified quality recognised by law and of traditional regional foods, within education campaigns for healthy nutrition

Italian agro-food is an important sector of national economy characterised by gastronomic and enological products of high quality including certified and recognised products. For those, a specific “*certificate of identity*” and “*guarantee of geographical origin*” is indicated in the label. In addition to that, traditional regional foods are largely diffused and requested by consumers often without specific rules. These products are particularly relevant in the national economy and are not constituted only by wine and cheese but also by meat products, olive oil and vegetable products. The problem of certification and the exacerbation of quality aspects are extremely complex. An excess in that sense could create confusion in consumers’ perception. It is very important to set up an information policy aimed at increasing the knowledge related to the intrinsic quality of products; quality is an added value of Italian dietary style. It is also of utmost importance to provide adequate information to the European consumers in relation to the traditional way of consuming typical Italian foods with particular regard for safety aspects (es. the rind of Gorgonzola should be removed before consumption).

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**CONFERENCE ROOM DOCUMENT****WHO SURVEILLANCE PROGRAMME FOR CONTROL OF FOODBORNE INFECTIONS  
AND INTOXICATIONS IN EUROPE.****by****FAO/WHO Collaborating Centre for Research and  
Training in Food Hygiene and Zoonoses  
Federal Institute for Health Protection of Consumers  
and Veterinary Medicine  
Berlin, Germany****INTRODUCTION****Right to Safe and High Quality Food**

Access to a safe and nutritious food supply is a basic right of all the people of the world. Producing good quality and safe food is a prerequisite to health, to food security, to successful and sustainable development of national agricultural resources and to the facilitation of domestic and international food trade.

**Consumer Concerns for food safety**

Consumers are concerned over the number and severity of food hazards, the increased level of foodborne disease outbreaks and numbers of cases involved, and the nearly continuous emergence of new food safety issues. In recent times, the increase and the globalization of the food trade has been beneficial to the economies of many countries, including developing and transitional countries. However, potentially negative effects are also a consequence, as hazards in or on food from one country may now be spread rapidly from country to country and simultaneously to many countries, once it enters the global distribution chain. The potential exposure of mass populations in enormous geographical areas seriously threatens the public health of the global population. A properly managed surveillance, monitoring and early alert system for the purpose of prevention and control of foodborne diseases and intoxications is essential to protect the public health.

**About this Document**

This document is intended to provide a brief background and description of the programme, emphasize the importance of this work in today's context, point to its successes as the leading surveillance programme for foodborne diseases in the WHO European Region. It should also promote advance planning for updating and modernizing the programme in order to accommodate anticipated future needs.

**WHO Surveillance Programme for Control of Foodborne Infections and Intoxications in Europe**

In 1980, as recommended by the WHO representatives of the European Region during their meeting in April 1979, a “WHO Surveillance Programme for the Control of Foodborne Infections and Intoxications in Europe” was established.

The overall responsibility for the management of the WHO Surveillance Programme lies with the Food Safety Programme of the WHO Regional Office for Europe. Under its supervision, the Federal Institute for Health Protection of Consumers and Veterinary Medicine (BgVV), a FAO/WHO Collaborating Centre for Training and Research in Food Hygiene and Zoonoses, has been managing the WHO Surveillance Programme for more than 20 years.

The Food Safety Programme of the WHO Regional Office for Europe is responsible of liaising with WHO Headquarters, the Collaborating Centre, FAO and other organizations as appropriate. It is foreseen that an advisory body will be established by WHO to review the progress of the Programme and to make recommendations for its future development.

The interest in the programme has increased continuously. From the early 1980 with eight (8) participating countries, to the present day with 49 participating countries, out of 51 WHO European Region, plus Cyprus. During the last 20 years valuable data on foodborne disease has been compiled and disseminated to all WHO Member Countries within the European Region as well as those outside the region. The important work of participating countries at the national level, serves to inform and educate all Member Countries of potentially hazardous food products, (including primary, fresh and processed foods), handling practices, technical failures and emerging food safety problems.

Through the years, in close collaboration with the WHO Regional Office for Europe, Food Safety Programme and with the participating countries, many improvements and advancements have been accomplished conducting surveillance at the national level and at the Centre in the administration of the programme. Continued success of the programme in light of the importance of this work requires continued review and updating to match the needs of the participating countries and to utilize modern surveillance methods and approaches.

**World Health Organization**

The World Health Organization (WHO) is a specialized international organization of the United Nations International System, and has the primary international responsibility for overall food safety worldwide in collaboration with other UN organizations such as FAO. With headquarters in Geneva, Switzerland and Regional Offices throughout the world, programmes for improving food safety for domestic consumption and trade at all levels are conducted to protect consumer health and promote food safety throughout the world.

Recently food safety and specifically foodborne disease surveillance has received significantly increased attention from WHO. For the first time in 40 years the World Health Assembly (top governing body of WHO) discussed a general resolution on food safety in May 2000 (WHA53.15). In this resolution the increased importance of food safety at the global level is clearly recognized, and specific reference to the need for means for surveillance of foodborne diseases is made. In a follow-up to this resolution WHO Executive Board January 2002 endorsed a WHO Global Strategy

for Food Safety. In the strategy the first out of seven Approaches is “Strengthening surveillance systems of foodborne diseases”. As part of the renewed efforts in the area WHO held the first international expert consultation on global foodborne disease surveillance and risk analysis, promoting the concept of inter-linkage between the foodborne disease surveillance data and other epidemiological data and the new microbiological risk assessment paradigm. The need for a continued source of standardized foodborne disease surveillance data is thus clearly greater than ever.

The WHO Regional Office of Europe, and specifically the Food Safety Programme has been proactive in supporting the Collaborating Centre in the management of the WHO Surveillance Programme for Control of Foodborne Infections and Intoxications in Europe. Based on official WHO rules, the Regional Office for Europe (based in Copenhagen) is responsible to officially contact and invite Member States to participate in the WHO Surveillance Programme. The persons or institutions officially nominated by their respective Ministries of Health to act as Contact Points are therefore WHO National Contact Point for the Surveillance Programme.

The increase in the number of participating countries and consequently the provision of data from a very large number of countries (50 in the 7<sup>th</sup> Report, 2001) is the result of the promotional activity carried out by the WHO Regional Office for Europe through its Food Safety Programme. The Food Safety Programme also assisted the Collaborating Centre in developing a preliminary electronic version of the 7<sup>th</sup> report, which was posted on the web at the end of 2000, as well as –since 1998- in translating the Programme Newsletter into Russian. This was very beneficial to the Newly Independent States (NIS), which became familiar with the WHO Programme and eventually officially appointed National Contact Points.

### **Collaborating Centres**

WHO has made and is making for many years best use of an international network of collaborating institutions to support their activities in disease prevention and health protection. Selected institutions are identified, selected and eventually approved to serve in specific health activities and disciplines. Selection is based on the institution’s reputation being well recognized by their peers, for their scientific and administrative abilities, their technical expertise and their contribution in furthering the development and advancement of science and training in activities supporting the goals and mandate of WHO. Some institutions serve in a joint capacity for both WHO and FAO, when institutions meet similar criteria for both organizations.

### **Joint FAO/WHO Collaborating Centre**

The FAO/WHO Collaborating Centre for Research and Training in Food Hygiene and Zoonoses was first designated in 1975. It was selected by both WHO and FAO on the basis that their institutional objectives were relevant to WHO and FAO mandated activities, they could fulfill the functions to support the international organization’s priority programmes, had the scientific and technical standing and demonstrated a high level of commitment at the national, regional and international level. The Centre played an important role in assisting the international organizations by strengthening institutional capacity in countries in the region and contributed in implementing programmes in close coordination with the regional offices and other national governments.

## **WHO SURVEILLANCE PROGRAMME FOR CONTROL OF FOODBORNE DISEASES IN EUROPE**

### **Objectives**

The intent of the WHO Surveillance Programme is primarily to strengthen the national surveillance programmes through activities which:

- Identify the causes of foodborne diseases and delineate factors contributing to the spread of these diseases;
- Make available and distribute relevant surveillance information;
- Facilitate cooperation with national authorities in identifying programme priorities and the use of resources to meet both emergency and other needs in the prevention and control of foodborne diseases.

Ultimate goal is to provide to risk assessors a complete and updated picture of the foodborne infections and intoxications in Europe on the basis of which the future directions of the food safety policy can be developed.

The WHO Surveillance Programme has also the mandate to serve as an early warning system by establishing an emergency reporting system.

An early warning (alert) report should be made for instance when:

- Internationally distributed foods or feeds resulted in incidents or are contaminated;
- Incidents associated with international caterer and carriers (air, train or ship);
- Illness occurs among members of a tourist group or is introduced by tourists or immigrants;
- Incidence of unusual foodborne diseases are recorded in a country;
- Incidents concern a disease of a severe nature;
- Other matters considered being an emergency by the country making the observations.

### **Participating Country Responsibilities**

The responsibilities of the participating WHO Member Countries, within the scope of their technical capabilities and available resources, are to collect, compile, analyse and report data of foodborne diseases and investigated outbreaks and other relevant to the Collaborating Center.

In consultation with WHO each participating country would designate one or more National Contact Points to provide official data and other related information to the Collaborating Center.

In performing their task the National Contact Point should coordinate with all national bodies and institutions involved in the surveillance of foodborne disease and in the investigation of outbreaks, promoting intersectorial collaboration.

The national authorities responsible for the surveillance of foodborne disease should provide information on their surveillance systems, statutory notification, epidemiologically investigated outbreaks and other relevant information. Particularly the Programme focus on epidemiologically investigated outbreaks which requires information on causal agents, epidemiological and clinical investigation data, vehicles of transmission, food analyses, contributing factors etc.. A specific reporting system utilizes a standardized report format (Report of Incident), and attachments to this

report with additional details are encouraged. Frequency of reporting is suggested to be at the completion of the investigation.

### **Responsibilities of the Collaborating Centre**

The Collaborating Centre is responsible for reviewing the data received from the participating countries for completeness. If the submitted information is sufficient, the Centre makes a comprehensive assessment of the situation. The data is collated, evaluated and analyzed for regional and international trends by the Centre. Summaries are made and jointly published by the Collaborating Centre and the WHO Regional Office for Europe, Food Safety Programme. They are distributed to all participating countries, as well as to other WHO Member Countries and other interested parties. The published report provides data on foodborne incidents based on the information officially submitted by the participating countries. The report particularly identifies causes of foodborne diseases occurring in Europe, delineates the factors contributing to the illness and outlines preventive actions. The report also contains narrative reports of foodborne incidents of epidemiological significance, results of special surveys carried out for specific reasons, and references to scientific literature.

## **CENTRE ACCOMPLISHMENTS**

### **Surveillance Reports**

Remarkable accomplishments have been achieved in the limited time of the existence of the Collaborating Centre and particularly in the management of the WHO Surveillance Programme. In close collaboration with the WHO Regional Office for Europe, Food Safety Programme, and in cooperation and with the able assistance of the national representatives of the participating countries, a major achievement since 1980 is the publication of the WHO Surveillance Programme Reports. The first issue was published in 1981, the latest, the 7<sup>th</sup> Report, issued in 2001, with a preliminary Internet version in 2000. The reports provide analysis of the causes and preventive measures for control of foodborne diseases. They provide a country report from each participating country, which includes a description of the surveillance system used and provides the results of their investigations of incidents within their borders. The reports provide comprehensive reviews of major foodborne outbreaks of significant impact in Europe. The most recent report contains surveillance data from 50 countries and is likely to be the most comprehensive compilation of foodborne disease data published for this time span (6 years) of the report.

Over the years, the Centre has published for the members and all other interested parties a WHO Surveillances Programme Newsletter. Newsletter No. 71 was recently issued and copies are being made available with this document. The Newsletter provides summaries and abbreviated reports of foodborne outbreaks and investigations world wide, results of surveys and studies in food safety related fields, and research results in laboratory methods, technology development, and food control. Newsletters are issued 3 to 4 times per year and can be obtained by requesting the Centre to place your name or institution on the current mailing list. An electronic mailing service is also provided by the WHO Regional Office for Europe, Food Safety Programme.



**Definitions of Terms and Codes Developed**

Another achievement, in cooperation with national representatives of the participant countries, includes the establishment of a set of harmonized definitions for terms used in surveillance. In addition, elements of the programme were codified to provide consistent meaning when used in reporting such as the codes used to identify the causative agents, involved food products or type, types of marketing involved, contributing factors such as handling practices, and places where food may have been contaminated.

**Conferences, Meetings, Consultations**

The Centre has hosted a number of significant meetings related to food safety, foodborne diseases, surveillance and monitoring programmes. In November of 1990 in cooperation with the WHO Regional Office for Europe, Copenhagen, the Centre planned and hosted an Expert Consultation on the Situation of Foodborne Disease in Europe. Expert panel, after reviewing the existing situation in Europe made recommendations to improve routine surveillance systems, epidemiological investigations, data management, laboratory procedures, and early warning systems. They also recommended specific activities for future surveillance programmes.

The FAO/WHO Collaborating Centre, outside the specific scope of the WHO Surveillance Programme, played a major role and hosted four World Congresses on Foodborne Infections and Intoxications, held in Berlin in 1980, 1986, 1992, 1998. The Fifth World Congress is presently in the planning stages to be held in 2003. These meetings have provided a forum for scientist, risk assessors and managers, food control officials and food industry experts to consider the food safety issues of the times. They also promoted cooperation between scientists engaged in this field around the world, bringing the combined expertise to bear on these problems and to recommend possible solutions in the interest of consumer protection.

**FUTURE CONSIDERATIONS FOR THE PROGRAMME****Reporting and Data Handling**

Depending on the present IT capability of most of the participating countries, the Centre is anticipating the use of electronic entry technology and the development of a data base system to streamlined the country reporting process. Such a procedure can improve the system by allowing for up-to-date and nearly real time data availability, and it could be used to improve data availability and quality as relates to microbiological risk assessment. It is anticipated that these changes may reduce the national workload and reporting time, make information more readily available in a timely fashion, and allow for the more efficient handling of the early warning aspects of the programme. At the present time, a prototype system is in the design stages. Discussions during the national contact point meeting in Berlin in April 2002 will provide opportunity for national input at this early but critical phase in the system development.

**Programme Review**

The basic objectives and the procedures were established in 1980 with the establishment of the WHO Surveillance Programme. Although improvements have been made from time to time since then, it is important to make a formal comprehensive review of the programme at periodic intervals to assure the goals and objectives are being met and that the effort in time and resource

expenditures is worthy for the benefits received. An advisory committee, made by country delegates representing all peculiarities of the WHO European Region, will assist the WHO Regional Office for Europe, Food Safety Programme, and its Collaborating Centre in steering the activity of the WHO Surveillance Programme in a way consistent with the Member States wishes and recommendations. The WHO Regional Office for Europe and its Collaborating Centre will convene an Advisory Committee Meeting in late 2002.

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PEC/CRD 18

(Original language)

**CONFERENCE ROOM DOCUMENT****GENERAL PRINCIPLES OF FOOD LAW IN THE EUROPEAN UNION****Contribution from the European Community**

**On 21<sup>st</sup> January 2002 the EU Council of Ministers agreed the last steps towards the adoption of a Parliament and Council Regulation setting up the European Food Safety Authority (EFSA) and laying down a new framework for Food Safety in the European Union. The new Regulation, which will be published in the Official Journal of the European Communities in early February also establishes the over-arching principles, definitions and requirements on which all future food law in Europe will be based.**

**Background**

European food legislation has evolved over the last forty years reflecting a blend of scientific, societal, political and economic forces. Over this period, food legislation has had different policy objectives linked to the Common Agricultural Policy or the development of the Internal Market. Although inextricably linked with the establishment and maintenance of a high level of protection of human health, safety and of consumer protection, food law at the European level was characterised with some divergence in approach, some inconsistencies and even some lacunae. One of the key objectives therefore of the new Regulation is to establish common definitions, including a definition of food, and to lay down the overarching guiding principles and legitimate objectives for food law in order to ensure a high level of health protection.

In contrast to the relatively recent development of food law at Community level, national “food acts” have a longer history. The Regulation harmonises at Community level existing national requirements, placing them in the European context.

**Definitions**

The new Regulation defines the term ‘*food*’ for the first time at the European level and thus removes some differences that exist in its definition between some of the Member States.

In addition it also defines the term ‘*food law*’ which covers a wider range of provisions than those that relate to just food. It includes all measures relating to materials and substances in contact with food for example, and to all measures which may have a direct or indirect impact on food safety.

The objective of defining food and other concepts in this Regulation is to provide legal certainty in relation to future European food law and provide an understanding at Community level for such concepts.

### **Overarching objectives of food law**

The Regulation establishes the rights of consumers to safe food and to accurate and honest information from which they can choose their diet. It complements the EC Treaty requirements in relation to food and the Community's responsibilities to ensure a high level of human health protection in the definition and implementation of Community policies and activities.

Future food law will be based on an integrated approach from the farm to the final consumer, including measures applicable on the farm. This principle will in future be considered in other areas as a general principle. Food law will also pursue the general objectives of the protection of animal or plant health and life and the protection of the environment where this is compatible with the nature of the measure.

Food law, both at the national and Community level not only provides health protection but also protects other consumer interests in relation to the prevention of deceptive practices, including the adulteration of food and ensures consumers are provided with accurate information. This regulation broadens the more specific provisions in Community labelling and advertising legislation by providing an overall principle that consumers must not be misled.

### **Scientific basis to food law**

The Regulation establishes the principles of risk analysis in relation to food law and establishes the structures and mechanisms in relation to the scientific and technical evaluation which will be, in the main, undertaken by the European Food Safety Authority.

Depending on the nature of the measure, food law, and in particular, measures relating to food safety, shall be underpinned by strong science. The European Community has been at the forefront of the development of the risk analysis principles and their subsequent international acceptance. The new Regulation establishes in EU law that the three inter-related components of risk analysis: risk assessment, risk management and risk communication provide the basis for food law as appropriate to the measures under consideration. Clearly not all food law has a strong scientific basis e.g. food law relating to consumer information or the prevention of misleading practices does not need a scientific foundation.

The new Regulation requires the scientific assessment of risk to be undertaken in an independent objective and transparent manner based on the best available science.

Risk management is the process of weighing policy alternatives in the light of the results of a risk assessment and, if required, selecting the appropriate actions necessary to prevent, reduce or eliminate the risk to ensure the high level of health protection determined as appropriate in the European Community.

In the risk management phase, the decision makers need to consider a range of information in addition to the scientific risk assessment, including for example, the feasibility of controlling a risk, the most effective risk reduction actions depending on the part of the food supply chain where the

problem occurs, the practical arrangements needed, the socio-economic effects and environmental impact. The new Regulation establishes the principle that risk management actions are not just based on scientific assessment of risk but also take into consideration a wide range of other factors legitimate to the matter under consideration.

### **Precautionary Principle**

The new Regulation also formally establishes the Precautionary Principle as an option open to risk managers when decisions have to be made to protect health but scientific information concerning the risk is inconclusive or incomplete in some way.

The precautionary principle is relevant in those specific circumstances where risk managers have identified there are reasonable grounds for concern that an unacceptable level of risk to health exists but the supporting information and data may not be sufficiently complete to enable a comprehensive risk assessment to be made. When faced with these specific circumstances, decision makers or risk managers, may take measures or other actions to protect health based on the precautionary principle while seeking more complete scientific and other data. Such measures have to comply with the normal principles of non-discrimination and proportionality and should be considered as provisional until such time that more comprehensive information concerning the risk can be gathered and analysed.

### **Traceability**

The identification of the origin of feed, food, ingredients and food sources is of prime importance for the protection of consumers particularly when products are found to be faulty. Traceability facilitates the withdrawal of foods and enables consumers to be provided with targeted and accurate information concerning implicated products. The new Regulation provides for traceability of all food and feeds as they move between businesses, with information on the traceability of the food or feed being made available to the competent authorities if requested. Importers are similarly affected, as they will be required to identify from whom the product was exported in the third country. This measure is limited to ensuring that businesses are at the least able to identify the one step in the food supply 'above' them and the one step 'below', unless specific provisions exist for further traceability.

### **Responsibilities**

The new Regulation establishes the basic principle that the primary responsibility for ensuring compliance with food law, and in particular the safety of the food, rests with the food business. Similarly this principle is applied to feed businesses. To complement and support this principle, there must be adequate and effective controls organised by the competent authorities of the Member States.

### **Food safety requirements**

The new Regulation establishes a food safety requirement which comprises two elements: i) food should not be injurious to health or ii) unfit for human consumption. Only one of these elements has

to be in place for the food to be considered as unsafe. These concepts exist internationally in *Codex Alimentarius* and also exist in the food law of several Member States of the EU. Injurious to health is further defined in this Regulation as this could have a broad interpretation.

In considering whether a food is potentially injurious to health it is important to consider the use of the food, information provided with the food and the processing or subsequent handling to which it is to be subject. Also in terms of the effects on an individual, both long term, cumulative and acute effects are considered as is also the possible impact on subsequent generations.

Food unfit for human consumption is also considered to be unsafe in this Regulation. Food, for example, putrid food, is unacceptable for human consumption and may be injurious to health. It may be almost impossible to prove injury or probable injury to health with such food, so this separate factor is included in relation to the overall food safety requirement.

The new Regulation also makes it obligatory for food businesses to withdraw unsafe foods from the market, and provide accurate information to the consumers when this is done. It requires food safety to be considered at all stages that may have an impact on food safety.

### **International obligations and trade in foods**

The new Regulation acknowledges the Community's commitment to its international obligations particularly in relation to the Sanitary and Phyto-Sanitary (SPS) and the Technical Barriers to Trade Agreements (TBT) under the auspices of the World Trade Organisation (WTO). It underscores the European Community's commitment to the development of international technical standards for foods. It also recognises the Community's obligation to consider international standards within both of these agreements but balances this with the Treaty requirement for a high level of health protection, and with the other objectives of food law established in this proposal. International standards will only be considered where the high level of health protection or the other objectives of food law are not compromised.

The European Community has been active in the development of international trading rules and standards and is committed to free trade in safe and wholesome foods. The new Regulation establishes the general principles upon which the international trade in food shall be based. It establishes the objective that food law will be developed in such a way that it does not arbitrarily or unjustifiably discriminate against any international trading partner and should not present a disguised barrier to trade.

### **Principle of transparency**

The Regulation establishes a framework for the greater involvement of stakeholders at all stages in the development of food law and establishes the mechanisms necessary to increase consumer confidence in food law.

This confidence is an essential outcome of a successful food policy and is therefore a primary goal of Community action related to food. Transparency of legislation and effective public consultation are essential to build this greater confidence. Better communication about food safety and the relevance of potential risks, including full transparency of the scientific opinions given to the Commission by its scientific committees are essential in this respect.

## **CONFERENCE ROOM DOCUMENT**

### **THE EUROPEAN FOOD SAFETY AUTHORITY**

#### **Contribution from the European Community**

**On 21<sup>st</sup> January 2002 the EU Council of Ministers agreed the last steps towards the adoption of a Parliament and Council Regulation setting up the European Food Safety Authority (EFSA) thus paving the way for the Authority to start its operation as early as possible in 2002.**

The primary responsibility of the Authority will be to provide independent scientific advice on all matters with a direct or indirect impact on food safety. The Authority has been given a wide brief, so that it can cover all stages of food production and supply, from primary production to the safety of animal feed, right through to the supply of food to consumers. It will gather information from all parts of the globe, keeping an eye on new developments in science. It will share its findings and listen to the views of others through a vast network that will be developed over time. As well as interacting with experts and decision-makers on many levels, EFSA will communicate directly with the public on its areas of responsibility.

Although the Authority's main "customer" will be the Commission, it will be open to respond to scientific questions from the European Parliament and the Member States and it can also initiate scientific investigations on its own behalf. The Authority will carry out assessments of risks to the food chain and indeed can carry out scientific assessment on any matter that may have a direct or indirect effect on the safety of the food supply, including matters relating to animal health, animal welfare and plant health. The Authority will also give scientific advice on non-food and feed GMOs, and on nutrition in relation to Community legislation.

#### **Legal Basis for the European Food Safety Authority**

The European Parliament and Council Regulation laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety was adopted by the Council of Ministers on 21 January 2002. In accordance with the provisions of this regulation, it will enter into force twenty days following

publication in the Official Journal. Thus the Authority is likely to have a legal base before the end of February.

In January 2000 the Commission issued its White paper on Food Safety in which it announced a comprehensive package of 84 measures the corner stone of which was the Regulation on General Food Law and the establishment of the European Food Safety Authority. The Commission adopted its proposal for the Regulation in November 2000. The rapidity with which this complex and comprehensive Regulation has been adopted reflects the exceptionally high importance attached to food safety in general, and the Authority in particular, by the Community Institutions and the Member States.

### **Making the European Food Safety Authority operational**

The adoption of the legal basis is a major milestone, opening the door to a series of practical measures that will need to be undertaken to make the Authority operational. Most importantly, it allows the Commission to initiate the procedures leading to the nomination of the Management Board and the Executive Director, which will give the Authority its legal personality.

Central to the tasks of the Authority is the provision of scientific advice by its Scientific Committee and Panels. The important steps of selecting and appointing members of the Scientific Committee and Panels can be made only after the Management Board and Executive Director are in place.

Once the Executive Director is in place the Authority will also be able to recruit suitable scientific, technical, communications and administrative staff to ensure that it is able to meet the demands placed upon it.

### **Legal Status of the European Food Safety Authority**

The European Food Safety Authority will be a Community body with its own legal identity, funded from the Community budget but operating independently of the Community institutions. It will not therefore be managed by the Commission but by an Executive Director who in turn will be answerable to a Management Board.

### **The tasks of the European Food Safety Authority**

The Authority will be responsible for:

- the scientific evaluation of risks,
- the collection and analysis of scientific data,
- safety evaluations of dossiers put forward by industry for Community level approval of substances or processes,
- identification of emerging risks,
- scientific support to the Commission particularly in the case of a food safety crisis,
- direct communication to the public and other interested parties of information concerning matters within its remit.



The Authority will primarily be a scientific risk assessment body; the responsibility for risk management or decision making remaining with the EU's political institutions: the European Commission, the Council of EU Ministers and the EU Parliament.

The Authority will develop and issue scientific and technical information on a wide range of matters affecting the safety of the food chain. It will also have extensive responsibilities for communicating scientific and technical information directly to the public in a coherent and consistent manner, working with other key food safety bodies in the Member States and the European Commission.

The objective is to ensure that its independence, scientific excellence and openness will make the Authority the automatic first port of call on matters relating to food safety.

### **Scope of the European Food Safety Authority**

The European Food Safety Authority will have a broad remit, allowing it to make scientific assessments of any matter which may have a direct or indirect effect on the safety of the food supply including matters in relation to animal health, animal welfare and plant health.

This is essential so as to avoid repeating the failures of the past to identify emerging risks in one field that may have an impact on another as was the case with BSE which emerged initially only as an animal health problem.

The Authority will also give scientific advice on non-food/feed GMOs and on nutrition in relation to Community legislation. It will therefore cover all stages of production and supply, from primary production, animal feed, right through to the supply of food to consumers.

### **The primary components of the European Food Safety Authority**

The Authority comprises 4 separate components:

#### **i) Management Board**

A Management Board shall have responsibility for ensuring that the Authority functions effectively and efficiently. The Board will be composed of 14 members appointed by the Council in consultation with the European Parliament. The Commission will be responsible for drawing up a list of candidates from which the selection is made. There will also be a representative from the Commission on the Board. Four of the members shall have their background in organisations representing consumers and other interests in the food chain.

The members of the Management Board will be appointed in such a way as to secure the highest standard of competence, a broad range of relevant expertise and, consistent with these, the broadest possible geographic distribution within the Union.

#### **ii) The Executive Director**

An executive director will be responsible for the day to day management of the Authority and will be answerable to the Management Board.

The Executive Director shall be appointed by the Management Board, on the basis of a list of candidates proposed by the Commission after an open competition, following publication of a call for an expression of interest in the Official Journal of the European Communities and elsewhere. The appointment will be for a period of five years, which may be renewable.

### iii) Advisory Forum

The Executive Director will be assisted by an Advisory Forum composed of representatives from the competent bodies in the Member States, which undertake tasks similar to those of the Authority, on the basis of one representative per Member State.

These bodies will most probably be national agencies performing risk assessments in the food sector where they exist in a Member State. Their close involvement is essential, for example, to ensure efficient networking with national scientific organisations as a mechanism for exchanging information on potential risks and for pooling knowledge. This will also encourage broad understanding and acceptance of the scientific advice of the Authority in Europe.

### iv) Scientific Committee and Panels

A Scientific Committee and several Scientific Panels will be responsible for the scientific opinions of the Authority.

The **Scientific Committee** will be responsible for the general co-ordination necessary to ensure the consistency in the scientific opinions of the different panels. This Committee will be composed of the chairpersons of the scientific panels and six independent experts who do not belong to any panel.

The **Scientific Panels** will be composed of independent scientific experts selected following an open call for expressions of interest and appointed by the Management Board. They will be selected on the basis of criteria of competence, knowledge, independence and experience. Members of the Scientific Committee and Panels will not be employees of the EFSA. The following 8 panels will be established:

- Panel on food additives, flavourings, processing aids and materials in contact with food;
- Panel on additives and products or substances used in animal feed;
- Panel on plant health, plant protection products and their residues;
- Panel on genetically modified organisms;
- Panel on dietetic products, nutrition and allergies;
- Panel on biological hazards (including TSE/BSE issues);
- Panel on contaminants in the food chain;
- Panel on animal health and welfare.

**For further background see:**

[www.efsa.eu.int](http://www.efsa.eu.int)

[http://europa.eu.int/comm/food/fs/efa/index\\_en.html](http://europa.eu.int/comm/food/fs/efa/index_en.html)

[http://europa.eu.int/comm/dgs/health\\_consumer/library/press/press135\\_en.pdf](http://europa.eu.int/comm/dgs/health_consumer/library/press/press135_en.pdf)

PEC/CRD 20

(Original language)

**CONFERENCE ROOM DOCUMENT****CONCEPT OF THE VIRTUAL FOOD SAFETY AGENCY****by B.G. Meerburg**FAO Sub-regional Office for  
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One of the main problems in both Western, but also in Central and Eastern European countries is the fragmented institutional structure and the division of responsibilities at national level. At EU-level and in some EU countries independent new agencies were created, while existing institutions keep their present function. Keeping this in mind, we have developed a concept of a Virtual Food Safety Agency. Its main objective is to protect public health from risks which may arise in connection with the consumption of food (including risks caused by the way in which it is produced or supplied) and furthermore to protect the interests of consumers in relation to food.

The present concept is based on FAO recommendations for national food safety agencies and utilizes the resources of the World Agricultural Information Centre (WAICENT) and in the future perhaps also the resources of the developing Biosecurity Portal.

The agency we suggest is completely independent from any ministry. It will be managed by a participatory committee under a chairperson that is appointed by the government. The main tasks of the Virtual Food Safety Agency will be to collect and combine the information that is provided by the various ministries involved in the food safety topic. It will also function as a data repository for all the data which is collected by the national control and inspection authorities, and will collect the research results of national and international sources on the topic of food safety.

Probably the most important task of the Virtual Food Safety Agency will be communication. The Agency should communicate with the general public, provide reliable information to the ministers that are, and remain, politically responsible, and to international organizations (FAO, WHO, EU, OIE). The committee will oversee the data and information collection functions and ensure the operation of the system.

Advantages may be:

- Present institutional structures remain;
- It can be achieved at lower cost than a total institutional reform
- Because of the increased coordination the food safety situation in the country will improve
- The communication with the general public is improved because reliable information is provided

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